

Specifications for the  
Lay Up Preparations of  
USCGC STORIS (WMEC-38)

May 2007  
Rev 0

UNITED STATES COAST GUARD  
MAINTENANCE AND LOGISTICS COMMAND PACIFIC  
NAVAL ENGINEERING DIVISION  
RONALD V. DELLUMS FEDERAL BUILDING  
1301 CLAY STREET, SUITE 807N  
OAKLAND, CALIFORNIA 94612-5249

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Definite work items are identified by a “D” preceding the item number in the table above. Optional work items are designated by an “O” and shall be individually priced for possible performance.

CUTTER DESCRIPTION — USCGC STORIS (WMEC 38)

[Design Class: 82 TE]

Hull Characteristics:

Length Overall	230' 0"
Length Between Perpendiculars	220' 0"
Frame Spacing	1' 0"
Beam, Extreme (@ Main Deck)	43' 0"
Beam @ DWL	41' 0"
Depth, Molded @ side to Main Deck amidship	19' 3.5"
Draft, Mean, @ Full Load Displacement	14' 10"
Full Load Displacement	1710 long tons
Minimum Operating Displacement	1392 long tons
Light Ship Displacement	1181 long tons
Hull Material	Riveted steel

Machinery Characteristics:

Main Propulsion	Diesel electric
Diesel Engines	Three EMD 645E6
D. C. Generators	Three Westinghouse
D. C. Propulsion Motor	One Westinghouse, 1800 HP
Propeller	One 10' 6" diameter x 7' 4" pitch, 5 blade, RH, bronze
Shore Tie	440 VAC, 200 Amp
Shaft Bearings, Forward	Orion Thrust
Shaft Bearings, Aft	Thordon
Shaft Seals; fore & aft	John Crane Type MX9

Tank Capacities:

Diesel Oil	324 long tons
Fresh Water	93 long tons

Complement:

Number Of Crew	68
Number Of Officers	10

## CONSOLIDATED LIST OF REFERENCES

### Drawings

225B-WLB 581-1, Rev B, Anchor Handling System Arrangement  
225B-WLB 601-2, Rev A, Booklet of General DRAWINGS2  
82-TE 103-1, Rev B; Booklet of General Plans  
82-TE 2200-2, Rev -; Steering Gear Arrg  
82-TE 3801-18, Rev -; As-Built Arrgt Heating Vent Commun Spaces  
82-TE 3801-25, Rev A; Vent Mods-Po, And Crew Berth Rearrg  
82-TE 3801-26, Rev A; Vent Mods for Comm Space Rearrg  
82-TE 3802-9, Rev -; Diag Arrgt Heating Sys  
82-TE 4000-1, Rev B; Machy Arrg Plan  
82-TE 4000-2, Rev B; Machy Arrg Elev  
82-TE 4000-3, Rev -; Machy Arrg Plan & Elevs  
82-TE 4801-2, Rev D; Arrgt of Drainage Piping  
82-TE 4803-1, Rev -; Mag Flooding Arrgt & Test Casting  
82-TE 4804-4, Rev E; Arrgt of Fresh Cold & Hot Water Sys  
82-TE 4805-1, Rev -; Piping Arrgt for Priming Eng Raw Water Gauges  
82-TE 4807-3, Rev -; Arrgt of SW Piping & Vent Pip Plumb Fixtures  
82-TE 4807-7, Rev -; Diagram-Main Engine SW Circ System  
82-TE 4808-1, Rev -; Piping Arrgt of VAC Flush Sewage Sys  
82-TE 700-2, Rev -; Docking Plan  
82-TE 9300-1, Rev -; Diag Piping Layout Fire Ext Sys CO2 Portable  
82-TE 103-1, Rev B, Booklet of General Plans  
82-TE 700-1, Rev H; Docking Plan  
82-TE 700-2, Rev -; Docking Plan

### Applicable Documents

[15 USC §2601 to 2692, Toxic Substance Control Act \(TSCA\)](#)  
[16 CFR §1303, Ban of Lead-Containing Paint and Certain Consumer Products Bearing Lead-Containing Paint](#)  
[29 CFR §1910, Occupational Safety and Health Standards](#)  
[29 CFR §1915, Occupational Health and Safety Standards for Shipyard Employment](#)  
[29 CFR §1926, Safety and Health Regulations for Construction](#)  
[29CFR1915.12, Rev -; Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment](#)  
[33 CFR §154, Facilities Transferring Oil or Hazardous Materials in Bulk](#)  
[33 USC §1251 to 1387, Federal Water Pollution Control Act](#)  
[33 USC §1342, National Pollutant Discharge Elimination System](#)  
[33 USC §2701 to 2761, Oil Pollution Control Act of 1990](#)  
[40 CFR §112, Oil Pollution Prevention](#)  
[40 CFR §204, Noise Emission Standards for Construction Equipment](#)  
[40 CFR §261, Identification and Listing of Hazardous Waste](#)  
[40 CFR §262, Standards Applicable to Generators of Hazardous Waste](#)  
[40 CFR §263, Standards Applicable to Transporters of Hazardous Waste](#)  
[40 CFR §279, Used Oil Management Standards](#)  
[40 CFR §300, National Oil and Hazardous Substances Pollution Contingency Plan](#)  
[40 CFR §61, National Emission Standards for Hazardous Air Pollutants](#)  
[40 CFR §761, Polychlorinated Biphenyls \(PCB\) Manufacturing, Processing, Distribution in Commerce, And Use Prohibitions](#)  
[42 USC §4851 to 4852, Residential Lead-Based Paint Hazard Reduction Act](#)  
[42 USC §4901 to 4918, Noise Control Act \(NCA\)](#)

[42 USC §6901 to 6991\(i\), Resource Conservation and Recovery Act \(RCRA\)](#)  
[42 USC §7401 to 7671\(q\), Clean Air Act](#)  
[42 USC §9601 to 9675, Comprehensive Environmental Response, Compensation, And Liability Act \(CERCLA\)](#)  
[49 CFR §100-199, Hazardous Materials Transportation, Handling, And Storage Regulations](#)  
[7 USC §136 to 136\(y\), Federal Insecticide, Fungicide, And Rodenticide Act \(FIFRA\)](#)  
[COMDTINST 6260.21, Hazard Communications for Work Place Materials](#)  
[COMDTINST 9077.1, Equipment Tag-Out Procedure, Revision C](#)  
[COMDTINST M10360.3, Coatings and Colors Manual, Revision C](#)  
[COMDTINST M10360.3C, Coatings and Colors Manual](#)  
[COMDTINST M16478.1, Hazardous Waste Management Manual](#)  
[COMDTINST M16478.2, Procurement, Handling and Disposal of Polychlorinated Biphenyls](#)  
[COMDTINST M6260.16A, Asbestos Exposure Control Manual, Ch-1](#)  
[MIL-A-22262B\(2\), Abrasive Blasting Media Ship Hull Blast Cleaning, 3/21/1996](#)  
[MIL-P-24647, Rev D; Paint System, Anticorrosive and Antifouling, Ship Hull, 2/16/2005](#)  
[MIL-PRF-16173, Rev E, 1/6/1993; Corrosion Preventive Compound, Solvent Cutback, Cold-Application](#)  
[MIL-PRF-24635, Rev C, 6/6/2003; Enamel, Silicone Alkyd Copolymer](#)  
[MLCPAC Standard Specification 074, Welding and Allied Processes, 3/21/2003](#)  
[MLCPAC Standard Specification 085.1, General Requirements for Drawing Preparation, 3/1/2000](#)  
[MLCPAC Standard Specification 997, Rev -, 3/29/2004; Drydocking](#)  
[NAVSEA S9AA0-AB-GOS-010/GSO, General Specifications for Overhaul of Surface Ships](#)  
[NAVSEA SL 740-AA-MAN-010, Rev 3, U.S. Navy Towing Manual, 9/1/1988](#)  
[National Fire Protection Association NFPA 51 Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, And Allied Processes](#)  
[Naval Ships' Technical Manual, Chapter 074, Volume 1, Chg 5, Welding and Allied Processes Rev 4, 8/1/1999](#)  
[Naval Ships' Technical Manual, Chapter 074, Volume 3, Gas Free Engineering \(Apr 98\)](#)  
[Naval Ships' Technical Manual, Chapter 593, Pollution Control \(Relevant Sections Excerpted At the End of Specification Item\)](#)  
[Nondestructive Testing Handbook, American Society for Non-Destructive Testing, Volume 1, Section 7](#)  
[SAE-AMS-C-6183, Rev -; Cork and Rubber Composition Sheet for Aromatic Fuel and Oil Resistant Gaskets, 12/18/1998](#)  
[The Society for Protective Coatings \(SSPC\)-SP 1, Solvent Cleaning, 11/1/1982](#)  
[The Society for Protective Coatings \(SSPC\)-SP 10/NACE No.2, Near-White Blast Cleaning, 9/1/2000](#)  
[The Society for Protective Coatings \(SSPC\)-SP 12/NACE No.5, Surface Preparation and Cleaning of Steel & Other Hard Materials by High and Ultrahigh Pressure Water Jetting Prior to Recoating, 7/1/2002](#)  
[The Society for Protective Coatings \(SSPC\)-SP VIS-1-02, Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning](#)  
[The Society for Protective Coatings \(SSPC\)/NACE VIS 4/NACE No. 7, Guide and Visual Reference Photographs for Steel Cleaned by Waterjetting](#)  
[The Society for Protective Coatings SSPC-SP 12/NACE No.5, Rev -, 7/1/2002; Surface Preparation and Cleaning of Steel & Other Hard Materials by High and Ultrahigh Pressure Water Jetting Prior to Recoating](#)  
[The Society for Protective Coatings SSPC-SP 7/NACE No.4, Brush-Off Blast Cleaning](#)

CONSOLIDATED LIST OF GOVERNMENT FURNISHED PROPERTY

Description	Manufacturer	Part Number	NIIN	Qty	UOI
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## **GENERAL REQUIREMENTS — LAYUP PREPARATIONS, CONTRACTOR'S FACILITY**

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### **1 INTENT**

This document invokes general requirements applicable to cutter repair contracts dockside (floating alongside a pier) at a ship repair Contractor's facility. The items discussed in the General Requirements are an amplification of, or are in addition to, the specific items of the Specification. Other sections of the contract establish requirements for work on Coast Guard cutters. The General Requirements are a part of the contract and, as such, compliance is a contractual requirement. The Contractor is responsible for understanding and complying with all requirements established in the Specifications.

Government Furnished Property: NONE

### **2 REFERENCES**

Coast Guard Drawings: NONE

Applicable Documents:

[COMDTINST M6260.16A, Asbestos Exposure Control Manual, Ch-1](#)  
[COMDTINST 6260.21, Hazard Communications for Work Place Materials](#)  
[COMDTINST 9077.1, Equipment Tag-Out Procedure, Revision C](#)  
[COMDTINST M16478.1, Hazardous Waste Management Manual](#)  
[COMDTINST M16478.2, Procurement, Handling and Disposal of Polychlorinated Biphenyls](#)  
[COMDTINST M10360.3, Coatings and Colors Manual, Revision C](#)  
MIL-A-22262B(2), Abrasive Blasting Media Ship Hull Blast Cleaning, 3/21/1996  
[MLCPAC Standard Specification 074, Welding and Allied Processes, 3/21/2003](#)  
[MLCPAC Standard Specification 085.1, General Requirements for Drawing Preparation, 3/1/2000](#)  
[National Fire Protection Association NFPA 51 Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, And Allied Processes](#)  
Naval Ships' Technical Manual, Chapter 074, Volume 1, Chg 5, Welding and Allied Processes Rev 4, 8/1/1999  
Naval Ships' Technical Manual, Chapter 074, Volume 3, Gas Free Engineering (Apr 98)  
NAVSEA S9AA0-AB-GOS-010/GSO, General Specifications for Overhaul of Surface Ships  
[Nondestructive Testing Handbook, American Society for Non-Destructive Testing, Volume 1, Section 7](#)  
[7 USC §136 to 136\(y\), Federal Insecticide, Fungicide, And Rodenticide Act \(FIFRA\)](#)  
[15 USC §2601 to 2692, Toxic Substance Control Act \(TSCA\)](#)  
[33 USC §1251 to 1387, Federal Water Pollution Control Act](#)  
[33 USC §1342, National Pollutant Discharge Elimination System](#)  
[33 USC §2701 to 2761, Oil Pollution Control Act of 1990](#)  
[42 USC §4851 to 4852, Residential Lead-Based Paint Hazard Reduction Act](#)  
[42 USC §4901 to 4918, Noise Control Act \(NCA\)](#)  
[42 USC §6901 to 6991\(i\), Resource Conservation and Recovery Act \(RCRA\)](#)  
[42 USC §7401 to 7671\(q\), Clean Air Act](#)  
[42 USC §9601 to 9675, Comprehensive Environmental Response, Compensation, And Liability Act \(CERCLA\)](#)  
[16 CFR §1303, Ban of Lead-Containing Paint and Certain Consumer Products Bearing Lead-Containing Paint](#)

[29 CFR §1910, Occupational Safety and Health Standards](#)  
[29 CFR §1926, Safety and Health Regulations for Construction](#)  
[29 CFR §1915, Occupational Health and Safety Standards for Shipyard Employment](#)  
[33 CFR §154, Facilities Transferring Oil or Hazardous Materials in Bulk](#)  
[40 CFR §61, National Emission Standards for Hazardous Air Pollutants](#)  
[40 CFR §112, Oil Pollution Prevention](#)  
[40 CFR §204, Noise Emission Standards for Construction Equipment](#)  
[40 CFR §261, Identification and Listing of Hazardous Waste](#)  
[40 CFR §262, Standards Applicable to Generators of Hazardous Waste](#)  
[40 CFR §263, Standards Applicable to Transporters of Hazardous Waste](#)  
[40 CFR §279, Used Oil Management Standards](#)  
[40 CFR §300, National Oil and Hazardous Substances Pollution Contingency Plan](#)  
[40 CFR §761, Polychlorinated Biphenyls \(PCB\) Manufacturing, Processing, Distribution in Commerce, And Use Prohibitions](#)  
[49 CFR §100-199, Hazardous Materials Transportation, Handling, And Storage Regulations](#)

### **3 ADMINISTRATION**

#### **3.1 DEFINITIONS**

3.1.1 Unless otherwise stated, the phrase *as shown*, *as indicated*, *as detailed*, or words of similar import refer to the contractual documents including drawings referenced in the specification.

3.1.2 The phrase *as directed*, *as required*, *as permitted*, *approved*, *acceptance*, or words of similar import refer to the direction, requirements, permission, approval, or acceptance by the Contracting Officer or a properly designated Contracting Officer's Representative (COR).

3.1.3 *Remove/Reinstall* – To remove the original item and then later install the same original item back in its place after performing specified work on it.

3.1.4 *Renew* or *renewal* – To remove the original item and to install a new item in new condition, identical or of like size, material and quality to that removed (i.e. "Renew-in-Kind").

3.1.5 *Replace* – To remove the original item and to install in its place a different item as described in the specification.

3.1.6 *Restore* – To bring back to the former, original or normal condition before alteration or removal.

3.1.7 *Underwater body* includes the external hull, all appendages, and sea chests from the keel up to and including the upper edge of the boot-top area.

3.1.8 The *Contracting Officer's Representative* (COR) is the person delegated by the Contracting Officer as the on-scene representative for matters concerning performance of work. This includes technical correctness, timeliness, and quality of the Contractor's work. Normally the Commanding Officer of the vessel is designated as the COR.

3.1.9 The *Coast Guard Inspector* is the COR or the individual designated by the COR to perform Coast Guard Inspector duties.

3.1.10 *Condition Found Report* (CFR) – See paragraph 3.8 below.

3.1.11 *Vessel* – Either a Coast Guard cutter (sixty-five feet or greater) or a Coast Guard boat (less than sixty-five feet.)



### **3.2 REFERENCES**

3.2.1 All references shall be of the issue and/or revision indicated in the consolidated list of references. It is incumbent on the Contractor to maintain current MLCPAC Standard Specifications. In many instances, the references will be available for review locally aboard the vessel or at the cognizant Naval Engineering Support Unit (NESU). U. S. Government issued Standardization Documents can be found at:

[http://stinet.dtic.mil/str/dodiss4\\_fields.html](http://stinet.dtic.mil/str/dodiss4_fields.html).

3.2.2 Detail and dimensioned drawings for precision equipment are generally accurate and will give sufficient information for estimating. However, allowance for changes in dimensions should be taken into consideration due to changes of equipment and to the structure and arrangement of the vessel. Actual installations shall conform to the specifications. When it is required that drawings or sketches be prepared, the Contractor shall meet the requirements of MLCPAC Standard Specification 085.1.

3.2.3 All referenced drawings and each piece or page of data that is marked with a Limited Rights Legend is a part of this specification and shall not be used for any purpose other than that contemplated by the specifications or item of work. The Contractor is prohibited from further use, release, or disclosure of this information.

3.2.4 Unless otherwise noted within this specification, hierarchy, priority, or order of precedence of requirements shall be as follows:

- Specification Definite Item or Optional Item
- Specification General Requirements
- Coast Guard Drawings
- Coast Guard Technical Manuals
- Commercial Drawings
- Commercial Technical Manuals
- Coast Guard Standards and Instructions
- Military and Navy Standards, Specifications, and Technical Manuals
- Commercial or Industrial Standards
- Commercial practices

3.2.5 Drawing discrepancies found in performance of work associated with this specification which may adversely affect work in this or future specifications shall be reported using "DRAWING DEFICIENCY ACTION FORM." This drawing feedback form, designed to be used by Contractor and Coast Guard personnel alike, may be downloaded from the Procurement section of the following Coast Guard web site:

[http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/files/procurement/Drawing\\_Deficiency\\_Action\\_Form\\_editable.pdf](http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/files/procurement/Drawing_Deficiency_Action_Form_editable.pdf). The form shall be downloaded, duplicated and completed, as necessary, to inform MLCP(vs) technical personnel of drawing & configuration problems, as well as, suggested recommendations which may correct them.

### **3.3 ARRIVAL CONFERENCE**

3.3.1 Within two days of the arrival of the vessel, and usually prior to the start of work, the Contracting Officer or the Contracting Officer's designated representative will meet with the Contractor at either the Contractor's conference facilities near the vessel or aboard the vessel (location to be at the sole discretion of the COR).

3.3.2 Normally this conference will be attended by the COR, designated Coast Guard Inspectors, representatives of the cognizant MLCPAC Naval Engineering Support Unit (NESU) and MLCPAC Support Branch (vr). For availabilities at Coast Guard facilities, the facility Hazardous Waste Coordinator will be invited to attend. A sample Arrival Conference Agenda can be found at

[http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/files/platform\\_support/Arrival\\_Agenda\\_Pkg\\_Form.doc](http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/files/platform_support/Arrival_Agenda_Pkg_Form.doc)

### **3.4 CONTRACTOR'S SUBMITTALS**

3.4.1 The Contractor shall provide the following at the arrival conference:

Subcontractor List  
Technical Representatives List  
Marine Chemist & "Competent Persons" List  
Welders' Qualification List  
List of Qualified Sil-Brazers  
Material Safety Data Sheets  
List of Key Personnel  
List of Emergency Phone Numbers  
Contractor's Inspection And Quality Control System  
Contractor's Property Administration System for GFE  
Certificate of Insurance  
Sample Copy of the Condition Found Report  
Contractor's Fire Emergency Response Plan  
(For cutters having fuel capacity greater than 10,500 gallons) Contractor's Oil Spill Response Plan per 33 CFR 154 et seq for bulk oil transfers  
Spill Prevention and Countermeasures Plan, in accordance with 40 CFR 112 et seq.  
Environmental Submittals required by paragraph 6.7  
Contractor Security Requirements

### **3.5 VESSEL'S SUBMITTALS**

3.5.1 The vessel will provide the following at the arrival conference:

List of Key Personnel  
List of Emergency Phone Numbers  
List of designated Coast Guard Inspectors

### **3.6 WORKING HOURS**

3.6.1 Except for items specifically authorized by COR, Contractor work shall normally be accomplished between the hours of 7:30 a.m. to 10 p.m. Monday through Friday, except Federal Holidays.

3.6.2 If the Contractor desires to accomplish work outside of normal working hours, request shall be made to the COR at least 24 hours in advance. Approval will be the sole discretion of the Contracting Officer or the COR.

### **3.7 PROGRESS MEETINGS**

3.7.1 Weekly progress meetings will be held at either the Contractor's conference facilities near the vessel or aboard the vessel, at the sole discretion of the COR. The day of the week and time of day for the weekly progress meeting will be set by the COR at the arrival conference. Representatives for the COR and the Contractor will meet before each progress meeting to review the percentage of completion for each work item and change. Each progress meeting will result in the COR producing a Contract Status Report documenting the percentage completion and documenting areas needing attention by the Contractor in order to complete the contract on time. The COR will transmit the Contract Status Report to the Contracting Officer, the NESU Representative, and MLC PAC(vr) the same day.

### **3.8 REPORTS/READINGS/AS FOUND CONDITIONS**

3.8.1 All readings and inspections are to be taken within twenty-four hours after the machinery or system is opened. The Contractor shall notify the COR of the time and location of inspections requiring Coast Guard verification 24 hours prior to such inspections, **unless** such inspections need to be conducted more than 50 road miles from the primary place of contact performance, in which case 3 working days notice is required, in order to make travel arrangements for the Coast Guard inspectors. Measurements and readings shall be taken with calibrated measurement and test instrumentation. **All reports of readings, operational tests and inspections required by the specifications shall be submitted to the COR in writing, using a "Condition Found Report (CFR)", within twenty-four hours after the readings and/or inspections are made.** Promptness in taking and

reporting readings is particularly important for underbody work items such as shaft bearing or rudder bearing clearances. Often during the progress of a work item, conditions are discovered by the Contractor which are considered abnormal for reasons of safety, expected reliability, health, or habitability. These conditions must be brought to the attention of the Coast Guard using a CFR. Details provided by the Contractor in a CFR are important because the CFR may result in a contract change. To speed the contract change process, the Contractor should include in the CFR the following details as a minimum:

3.8.1.1 A sequential number.

3.8.1.2 The contract item which the "CFR" relates to (i.e. D-XX).

3.8.1.3 A clear statement, definition, and description of the condition found, including but not limited to frame numbers, part numbers, materials, and dimensions as appropriate.

3.8.1.4 A proposed or recommended repair to correct the defective condition, including but not limited to frame numbers, part numbers, materials, and dimensions as appropriate.

3.8.1.5 Indicate whether the report requires Coast Guard action or if it is provided "for info" only. If action is required, indicate the time and date when the Coast Guard response is required in order to complete the action within the specified contract performance period. If the action cannot be completed within the specified contract period, so state.

3.8.1.6 A space on the form for the Coast Guard designated representative to make comments.

3.8.1.7 All CFRs shall be signed, dated and submitted by the Contractor's Ship Superintendent.

### **3.9 GOVERNMENT FURNISHED MATERIAL/EQUIPMENT**

3.9.1 The Contractor shall furnish all equipment, staging, materials, fittings, tools, etc., necessary for proper completion of each item of work unless the specifications indicate the Coast Guard will provide GFM/GFE.

3.9.2 If GFM/GFE is to be furnished by the Coast Guard, it will be indicated in the specification for the specified work item. Unless otherwise noted in the specifications, GFM/GFE will be delivered by the Government to pierside/dockside of the vessel (at the place the vessel is located for the performance of work under this contract). Unless otherwise noted in the specifications, delivery date will be at the Coast Guard's discretion between the start of the contract and up to 5 working days after the start of the contract.

3.9.3 The Contractor shall perform sufficient receipt inspection of the GFM/GFE and then sign for custody of the GFM/GFE by a Coast Guard form DD1149 or comparable Contractor's form. The Contractor assumes the risk of, and shall be responsible for, any loss or destruction of, or damage to Government property upon its delivery to the Contractor. However, the Contractor is not responsible for reasonable wear and tear to Government property properly consumed in performing this work.

3.9.4 It shall be the Contractor's responsibility to move or rig all GFM/GFE from the point of delivery to the point of storage (if necessary) and then to the point of use.

3.9.5 At the end of the contract, the Contractor shall turn over to the Coast Guard any and all GFM/GFE which was not installed under the terms of the contract.

### **3.10 SANITARY FACILITIES**

3.10.1 Sanitary facilities for Contractor personnel shall be Contractor's responsibility; Contractor's sanitary facilities shall be separate & distinct from sanitary facilities used by vessel personnel. During any period that any or

all of the vessel's head facilities are unavailable for use due to Contractor's performance under this contract, the Contractor shall provide clean, sanitary replacement facilities.

### **3.11 SMOKING AND TOBACCO PRODUCTS**

3.11.1 Smoking and use of tobacco products aboard the Vessel or in Vessel office space is prohibited. Exceptions may be permitted if in strict compliance with Vessel rules and regulations (which may include designated smoking time/area).

### **3.12 CONTRACTOR SERVICES**

3.12.1 The Contractor shall provide all services required by the Contractor for the completion of work. These services include but are not limited to electrical power, compressed air, steam, crane services, garbage and refuse, phones, office space, and portable toilet facilities. These services are for the Contractor's use only. Services required by the vessel are found in the "Temporary Services" item of the specification.

## **4 WORK CONTROL**

### **4.1 TAG-OUT PROCEDURES**

4.1.1 To prevent injury to personnel and/or damage to ship systems equipment tag-outs must be properly conducted. Ship's force will work closely with the Contractor to ensure tag-outs are done in a thorough and efficient manner as outlined below and in more detail in COMDTINST 9077.1, Equipment Tag-out Procedure.

#### **4.1.2 Tag-Out Establishment**

4.1.2.1 Prior to start of work on this Item, notify the Coast Guard Inspector in writing of equipment, systems, circuits, components, piping, and valves that require isolation so that tag-outs can be accomplished as required by COMDTINST 9077.1, Equipment Tag-out Procedure.

4.1.2.2 Ship's Force personnel will position equipment and install tags when tag-out of equipment, systems, circuits, components, piping, or valves as required.

4.1.2.3 The Ship's Authorizing Officer (normally the Engineer of the Watch) and the Repair Activity (Contractor's) Representative shall each verify that the tag-out is sufficient to prevent operation of equipment, systems, circuits, components, piping, or valves from all stations that could exercise control. Tags shall also be hung as required by COMDTINST 9077.1, Equipment Tag-out Procedure, paragraph 1.d to control the status of non-permanent jumpers, locking devices, seals, blank flanges, relief valve gags, or similar safety devices.

4.1.2.4 A Contractor's representative shall also verify that each tag is attached to the proper component and that it is in the condition required by the tag-out record sheet. This verification shall be made by witnessing the actions of the Ship's Force member posting or checking the tags and observing devices such as valve position indicators, operating handles, etc.

4.1.2.5 A Contractor's designated representative shall sign and identify his company on each ship's tag-out record sheet and tag prepared to support the Contractor's work.

#### **4.1.3 Tag-Out Clearance**

4.1.3.1 To facilitate prompt removal of tags, the Contractor shall notify the Coast Guard Inspector immediately when the Contractor's work is complete and the affected system, piping, or circuit is ready for activation.

4.1.3.2 Tags shall be cleared and removed in accordance with COMDTINST 9077.1, Equipment Tag-out Procedure, before the equipment is operationally tested or operated.

4.1.3.3 The Ship's Authorizing Officer and the Repair Activity (Contractor's) Representative shall each verify that the work necessary to clear a tag-out has been completed prior to authorizing removal of the tags. Both parties shall concur to clearing the tag-out by signing the ship's tag-out record sheet.

4.1.3.4 Ship's Force personnel will remove the tags so authorized for clearance.

## **4.2 SAFETY REQUIREMENTS**

4.2.1 The Contractor shall comply with and ensure compliance to the following for operations which may affect Government personnel or property: 29 CFR Part 1915, "Occupational Safety and Health Standards for Shipyard Employment", 29 CFR Part 1910, "Occupational Safety and Health Standards", and 29 CFR Part 1926 "Safety and Health Requirements for Construction".

4.2.2 The following are deficiencies commonly encountered on safety inspections and are therefore emphasized here:

4.2.2.1 Anti-backflash control valves are required on all welding rigs (NFPA 51).

4.2.2.2 Scaffolds and/or lifelines are required when working above five feet. 29 CFR 1910 and 1915 cover this in detail. The following are commonly encountered problem areas:

4.2.2.2.1 Scaffolds require standard 42" high rails & midrails and 4" toeboards.

4.2.2.2.2 Planking must be scaffold-grade and completely cover the area between the railings and the ship.

4.2.2.3 Lifelines, body harnesses and lanyards are required wherever standard rails are not feasible. Lines must be kept taut, never allowing a fall of greater than six feet.

4.2.2.4 Lifelines must be attached above the worker.

4.2.3 Gear and equipment for rigging and lifting shall be in good working condition and operated according to the regulations set forth in 29 CFR 1915.111-116 and 29 CFR 1910.184. Proper safety precautions shall be practiced in the use of tag lines, mousing of hooks, and moving loads. In addition to the above requirements, all cranes used for work on the vessel or for handling GFM/GFE shall have a current weight handling certification in accordance with local, state and federal laws.

4.2.4 Tools and related equipment are addressed in 29 CFR 1915 Subpart H. Of particular concern is the use of ground fault circuit interrupters (GFCI) with power tools and the use of double insulated power tools. All shore supplied power circuits shall be protected by GFCI'S and have a grounding circuit back to shore. In addition, all power tools shall be approved by Underwriters' Laboratories, or by other testing laboratories approved by the Contracting Officer and either be double insulated or have a grounded circuit.

4.2.5 Personnel protective equipment must be maintained and used in accordance with 29 CFR 1915.151-160.

4.2.5.1 Where personnel exposures can not be maintained below the PEL using appropriate engineering controls, the Contractor shall provide all Contractor personnel with appropriate respiratory protective equipment or other protective equipment specified by the manufacture or where the Contractor/Contractor's industrial hygienist has determined that exposures could exceed the PEL. The Contractor shall also ensure personnel are properly protected from sensitizing agents/conditions reported by the manufacturer in the Material Safety Data Sheets. These operations include, but are not limited to spray painting and grinding. Selection of respiratory protective equipment should be based on sound industrial hygiene sampling data for the material being worked. Airline hose masks or

Self Contained Breathing Apparatus (SCBA) shall be provided to all personnel conducting abrasive blasting or confined space operations, unless an industrial hygienist has determined that exposures can be maintained below the PEL. In addition, respiratory protection for all work which could be immediately dangerous to life and health must consist of either an SCBA or a airline hose mask with an escape bottle as a designed component of the mask assembly.

4.2.5.2 Air line respirators shall be fitted with a pressure regulating valve, a filter which will remove oil, water, and rust particles, and a carbon monoxide alarm. The air intake shall be from a source free from all contaminants, such as the exhaust from internal combustion engines, and air must meet Grade D.

4.2.5.3 Safety harnesses shall be equipped with lifelines which are secured with a minimum of slack when in use. Lifelines must not permit a drop of greater than six feet or contact with any lower level.

4.2.6 Confined space entry requires initial gas free certification by a Marine Chemist in accordance with 29 CFR 1915 (59 FR 37816 of 25 Jul 94). The Contractor shall be responsible for monitoring and maintaining the "safe" condition during the entire time work is being performed. Monitoring shall be conducted by a NFPA certified Marine Chemist or a Competent Person. As a minimum, test/certification shall be made before each work shift or daily, whichever is more frequent, and duly recorded on all required certificates.

4.2.7 The Contractor shall provide to the vessel Material Safety Data Sheets for all hazardous materials used under this contract (including petroleum products), at least two working days prior to its use, if not previously submitted per paragraph 3.3. These include, but are not limited to, paints, solvents, cleaners, and abrasive blasting grits.

4.2.8 The Contractor shall ensure paints, solvents, etc., used in, on or around the vessel are used in a manner which prevents personnel exposure to concentrations of vapors exceeding Permissible Exposure Limits (PELs), or Threshold Limit Values (TLVs) for chemicals for which PELs are not listed in OSHA standards.

4.2.9 Each fuel and gas system supplied from shore shall be arranged to be secured by a valve located off the ship and marked to show its purpose. When not in use, fuel and gas hose valves shall be secured at the manifolds and the hoses pulled back to the open deck. Unused manifold valves shall be capped.

4.2.10 The Contractor shall control abrasive blast grit sufficiently to prevent exposure to personnel at or greater than Permissible Exposure Limits (as defined by OSHA). Ensure abrasive blast grit does not contain free silica.

### **4.3 QUALITY CONTROL**

4.3.1 The Contractor shall implement the quality control (QC) program submitted in paragraph 3.4.9. Quality assurance is the sole responsibility of the Contractor. The COR may delegate inspection responsibilities to members of the vessel's crew. The designated inspectors monitor the progress of work done by the Contractor. If, during the performance of work the Coast Guard Inspectors witness work that fails to meet the specifications, work that is otherwise unsatisfactory, or conditions which may lead to an unsatisfactory end product, the inspectors will alert the COR who will advise the Contractor informally of the deficiency. If the deficient work is not corrected within a reasonable period of time (as approved by the COR), the COR will officially alert the Contractor via a Contract Deficiency Report. The COR will initiate the report (a sample report may be found at [http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/files/platform\\_support/Arrival\\_Agenda\\_Pkg\\_Form.doc](http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/files/platform_support/Arrival_Agenda_Pkg_Form.doc)) and submit it to the Contracting Officer with copies to the cognizant NESU and MLCPAC(vr). The Contracting Officer will forward the original to the Contractor.

### **4.4 INTERFERENCES**

4.4.1 The prices offered shall include the cost of performing all the necessary removal, relocation, and/or reinstallation of ship's structure, materials, and equipment in connection with the work. The fact that an interference is not shown on a plan or specifically identified in the specification item is not justification for a contract change. A physical check of each job aboard the vessel prior to bidding is strongly encouraged.

4.4.2 **Removal and Reinstallation of Interferences.** The Contractor shall remove and reinstall all interferences and obstructions necessary to complete the required work without regard to whether interferences are indicated under specification work items. This may include the removal of machinery, piping, ducts, wiring, insulation, structure and anything else which interferes with the proper accomplishment of a work item. Prior to being disturbed or removed and in the presence of the Coast Guard Inspector, the Contractor shall operationally test each interference reporting by Condition Found Report any existing operational defects or deficiencies. While awaiting reinstallation and restoration, the Contractor shall maintain and protect interferences. When determined to be in the best interest of the Coast Guard & the Contractor and upon Coast Guard approval, interferences may be modified or altered and returned to essentially the same configuration and condition. They are then to be retested in the presence of the Coast Guard Inspector to verify proper operation. Otherwise, upon completion of required work, the Contractor shall restore interferences to their original configuration and condition, and in the presence of the Coast Guard Inspector retest for proper operation.

#### **4.5 EXTERIOR/COMPARTMENT PRESERVATION/PROTECTION**

4.5.1 To prevent damage arising from the performance of the contracted work, it shall be the responsibility of the Contractor to provide adequate protection to the vessel or any government property in areas where the work under items of these specifications is to be accomplished. Any damage resulting from the Contractor's failure to adequately protect the vessel or government property shall be repaired by the Contractor at no charge to the government.

4.5.2 Compartment Cleaning and Finishing – When the Contractor enters a compartment for the accomplishment of work, the Contractor is to notify the Coast Guard Inspector and jointly inspect the compartment prior to starting the work. All areas in way of the Contractor's work, whether or not directly repaired or altered, are to be restored to as clean and ship shape condition on completion of the work as when work was started. For example, the decks leading to work areas are to be cleaned and, if required due to unusual wear by the Contractor's crew, the work sections are to be either refinished or renewed so that they match the original condition of the decks.

4.5.3 Protective Coverings – All machinery, equipment, deck covering, insulation, and open vent terminals exposed to dust or drifting particles resulting from work under this contract shall be adequately protected. Methods of protection include, but are not limited to fire-retardant blanket (if required due to sparks or slag), canvas, or plastic coverings. All open vent intakes shall be completely covered with air intake screens fitted with 20 pores per inch polyester or polyurethane foam filtering material and shall be maintained by the Contractor to prevent excessive air restriction and/or damage to ventilation motors. Any damage resulting from failure by the Contractor to provide adequate coverings shall be repaired at the Contractor's expense. It shall be the responsibility of the Contractor to provide adequate protection to all deck covering in areas where the work under items of these specifications is being accomplished and on all main access routes to these areas. Acceptable protective covering will be either heavy cardboard, masonite (fiberboard), or plywood installed in sufficient quantities to adequately protect existing deck covering. Any protective coverings which are damaged during the course of work shall be immediately repaired or renewed by the Contractor.

4.5.4 Glass – All glass (port lights, windows, etc.) adjacent to areas interior and exterior where abrasive blasting, burning, or welding is required or accomplished shall be covered to prevent scarring and damage.

4.5.5 Ragged Edges – Care is to be taken to smooth off all ragged edges or burned off edges by grinding or filing to leave a smooth surface. Removal of fixtures, equipment, plating, piping, and fittings shall be made clean to the root and finished off. Where pipes, cables, and fittings are removed, the hole shall be blanked off flush with welded plates of like material and thickness.

4.5.6 Bracket and Supports – All pipes, cables, duct work, installed furniture, and equipment shall be bracketed, supported, and/or secured so as to carry the weight, prevent excessive vibration, and withstand inertia forces resulting from rolling and pitching.

4.5.7 Dirt/Debris/Trash – At the end of the work day, the Contractor shall remove all dirt, debris, trash, grinding dust and excess material from the vessel in areas and access to areas where work is being accomplished. The

standard for this daily clean up is that the decks will be broom/vacuum clean, no liquids will be left standing on decks, and items which will not be further used for the work will be removed from the vessel. The goals behind this requirement are to remove fire hazards, to improve access within the vessel for routine and emergency movement of personnel, and to preserve the material condition of the vessel.

#### 4.5.8 Painting

4.5.8.1 All burned or scarred areas, new structure, or plating resulting from any work performed by the Contractor shall be cleaned and repainted in accordance with this specification, the Coatings and Color Manual (Commandant Instruction M10360.3), or vessel paint schedule in that order of priority. The Coast Guard Inspector will inspect surface preparation prior to painting to assure conformance with specifications and COMDTINST M10360.3. Prime bare metal to prevent rusting. Re-preparation due to rust bloom shall be the responsibility of the Contractor at no charge to the Government.

**NOTE:** Local VOC restrictions may reduce number of paint system options permitted by the Coatings and Color Manual (Commandant Instruction M10360.3). Ensure VOC limits of painting systems used comply with local (where work is performed) requirements.

4.5.8.2 All steel and aluminum installed under this contract shall, prior to installation, be free of mill scale and corrosion. Except where otherwise specified, all steel shall be properly primed with one liberal coat of high build epoxy primer in accordance with the Coast Guard Coatings and Color Manual (COMDTINST M10360.3).

**NOTE:** Apply all coatings in strict compliance with manufacturer's application instructions.

4.5.8.3 Where new paint is to be merged into the existing paint system, feather into the surrounding paint. Apply paint to surfaces only if they are dry and free of sand, dust, grease, or any foreign material. Apply paint only if surface is five or more degrees F. above the dew point.

4.5.8.4 Paint must have an age less than the manufacturer's recommended shelf life. The Contractor shall supply certified laboratory reports showing product, batch number, and date of manufacture for each batch of paint to the designated Coast Guard Inspector.

4.5.8.5 Store paint for at least 48 hours prior to painting so it is maintained between 65 and 85 degrees F. Issue paint from storage so that it is applied before the paint temperature drops below 50 degrees F. Do not apply paint if the paint temperature is below 50 degrees. When ambient temperature drops below 50 degrees F. or wet weather is encountered, the Contractor shall ascertain whether the paint manufacturer recommends any substitutions of paint, alteration of paint formulas, or modified application instructions. Any substitution of paint is subject to approval of COR. Adhere to all of the manufacturer's recommendations.

4.5.8.6 All paints shall meet the environmental standards for the locale at which they are applied. This includes, but may not be limited to, meeting volatile organic compound (VOC) limits for coating systems.

4.5.8.7 Quality assurance inspections are required for all painting done in accordance with individual work items, and are to be recorded the Paint Log. The Paint Log will be filled out by the Contractor, verified by the Coast Guard Inspector and retained by the vessel for hull history. The forms may be downloaded from the Procurement section of the following Coast Guard web site:

<http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/index.htm>.

4.5.9 Fluid Containers & Piping. The Contractor is responsible for containment, clean up, and disposal of any fluid spilled during course of their efforts (e.g., includes spills resulting from mishandling, disassembly & piping removal).

#### 4.6 HOTWORK/WELDING



4.6.1 The Contractor and Coast Guard Inspectors shall comply with the hot work, atmospheric testing, ventilation, and safety precaution requirements contained in 29 CFR Part 1915, "Occupational Safety and Health Standards for Shipyard Employment", and Naval Ships' Technical Manual, Chapter 074, Volume 3, Gas Free Engineering.

4.6.1.1 The Contractor shall certify that a safe atmosphere exists in and about a compartment before starting any work which may produce the heat of ignition, sparks, or flames. The Contractor shall pump down, wipe up, ventilate, or take any other action required to make the compartment safe for personnel and the work to be performed. To facilitate hot work and upon Contractor request, Coast Guard will pump down bilges, tanks, and voids to their lowest level with installed pumping systems, and shift and/or off-load fuel. The Contractor shall be responsible for any further fluid removal below installed pump's low suction. Unless otherwise provided in the specifications, further fluid removal for any other non hot work purpose (e.g., weight distribution for drydocking) shall be the Contractor's responsibility.

4.6.1.2 Initial gas free certification shall be conducted by a NFPA certified Marine Chemist, except in such cases where a Competent Person is authorized to conduct certification in accordance with 29 CFR 1915 (59 FR 37816 of 25 Jul 94). All tests shall be conducted with equipment meeting National Fire Protection Association standards. One current copy of the Gas Free Certificate shall be given to the vessel's Engineer, a copy shall be posted on the ship's quarterdeck, and a copy shall be posted adjacent to all accesses of the space, void, tank, or area where work is being performed.

4.6.1.3 The Contractor shall be responsible for monitoring and maintaining the "safe" condition during the entire time work is being performed. Monitoring shall be conducted by a NFPA certified Marine Chemist or a Competent Person. As a minimum, test/certification shall be made before each work shift or daily, whichever is more frequent, and duly recorded on all required certificates.

4.6.2 ALL FIREWATCH PERSONNEL SHALL BE CONTRACTOR PROVIDED.

4.6.3 Unless otherwise specified, all welding and hot work shall be in accordance with MLC PAC Standard Specification 074, Welding and Allied Processes. This specification includes requirements for welders, fire watches, equipment, procedures, and safety precautions.

4.6.4 The Contractor shall submit a list of qualified welders, including welder's name, type of qualification, and date of last qualification test, to the COR at the Arrival Conference. Prior to arc welding, the Contractor shall ground the hull of waterborne vessels fore and aft in accordance with Naval Ships' Technical Manual, Chapter 074, Volume 1, Welding and Allied Processes.

#### **4.7 MAINTENANCE OF WATERTIGHT INTEGRITY**

4.7.1 Upon completion of any work on a water or oil tight boundary (including hull), perform an "air hose test" (also known as liquid film bubble emission leak test) along entire length of affected boundary. This test shall be in addition to any NDT which may be specified. Apply a solution consisting of equal parts of liquid soap or detergent and glycerin, and 4.5 parts water, to one side of affected boundary, while applying air pressure or a jet of dry air to opposite side of affected boundary. For tanks and voids, pressurize compartment to 2 psi. For watertight compartments which are not tanks or voids, direct a jet of dry air on affected boundary. In all cases the nozzle shall be as close as possible to item under test and the stream directed against all compartment boundaries, plate connections, closures, fittings and boundary penetrations in the manner most likely to reveal leaks. The nozzle diameter shall be 3/8 inch minimum and the pressure at the nozzle shall be 90 psi minimum. Closely inspect low pressure (solution) side of affected boundary in presence of the Coast Guard Inspector. Defects/discrepancies will appear as small bubbles in soap solution. Correct defects/discrepancies and retest. Repeat until a satisfactory bubble emission test is obtained.

#### **4.8 SCRAP/SALVAGE**

4.8.1 The COR shall determine which existing materials removed or disconnected are of scrap/salvage value to the Government. Though not indicated or specified for reuse in the new work, those materials shall remain the property

of the Coast Guard. The material shall be placed on the deck of the vessel or Government truck, or packed/palletized and shipped by the Contractor (funded by the Coast Guard) as directed by the COR. Material not identified by the COR for retention shall be designated as scrap. The Contractor shall store scrap at no additional cost to the Government and dispose of the scrap upon completion of the contract. The Contractor shall submit a proposal, supported by an invoice from a scrap dealer, to credit the Government for the value of the scrap.

#### **4.9 LABEL PLATES/TAGS**

4.9.1 The Contractor shall provide label plates for all new and/or redesignated access fittings, compartments, electrical and electronic equipment and fittings, ventilation blowers and systems, valves, and any other equipment and/or fittings requiring them as indicated on installation drawings. The Contractor shall also provide label plates where they would normally be required as indicated on similar listings in the ship's label plate list or as set forth in the NAVSEA S9AA0-AB-GOS-010/GSO, General Specifications for Overhaul of Surface Ships

#### **4.10 ABRASIVE BLAST & PAINT OVERSPRAY**

4.10.1 The Contractor shall ensure that all abrasive blast material, paint particle/waste, and paint overspray is managed in accordance with all applicable federal, state and local environmental/personal exposure requirements and is contained in the work area, and not allowed to enter the atmosphere or water. This prevention may include, as necessary, the use of vacuum-blasting techniques, the construction of temporary shelters, and covering all openings, open areas, and other possible exits, including, but not limited to, scuppers, railings, freeing ports, ladders, and doorways. The Contractor shall install protective covering on all vessel carpeting and tile when major grit blasting (as determined by the COR) is to be performed during the contract.

4.10.2 Blast material used shall meet the environmental profile specified in Paragraph 3.4.12 (Hazardous Waste Minimization) of Mil-A-22262(SH).

#### **4.11 DISASSEMBLY & INSPECTION ACTIONS**

4.11.1 Any additional work resulting from required disassembly and inspection actions is typically disruptive and may cause availability schedule delays. To minimize adverse impact of such work, all required disassembly and inspection actions shall be accomplished before 25% of availability contract period has elapsed. Production schedule submitted to Coast Guard shall clearly show & schedule all disassembly & inspection actions.

#### **4.12 SECURITY**

4.12.1 At the end of each workday, all electrical power onboard the cutter shall be secured, except for the alarm panel, and all exterior access doors shall be locked. The cutter's fire and flooding alarms have been rigged for external indication, and the shipyard's normal security watch shall monitor same. The shipyard shall respond to alarm indications in accordance with their own established procedures for commercial vessels. The shipyard shall test the alarm system weekly.

### **5 ACCESS TO VESSEL**

#### **5.1 FUEL OIL OFFLOAD/ONLOAD**

5.1.1 The Coast Guard reserves the right to call in an outside contractor to offload/onload fuel oil to the vessel while at the Contractor's facility. The Coast Guard will coordinate the fuel oil transfer evolution with the Contractor to ensure that fuel oil can be offloaded/onloaded prior to conducting any tests or operations that require the vessel to be at a full load condition.

#### **5.2 TECHNICAL REPRESENTATIVES**

5.2.1 Refer to the "Access To Vessels" clause contained in Section H of this contract.

## **6 ENVIRONMENTAL**

### **6.1 DEFINITIONS**

6.1.1 Solid Waste: Rubbish, debris, sanitary waste, and other discarded solid materials resulting from industrial, commercial, and agricultural operations, and from community activities.

6.1.2 Rubbish: A variety of combustible and noncombustible wastes such as paper, boxes, glass, crockery, metal, lumber, cans, and bones.

6.1.3 Debris: Includes combustible and noncombustible wastes, such as ashes, waste materials that result from construction or maintenance and repair work, leaves, and tree trimmings.

6.1.4 Chemical Wastes: Includes salts, acids, alkalis, herbicides, pesticides, and organic chemicals.

6.1.5 Sanitary Wastes:

6.1.5.1 Sewage: Wastes characterized as domestic sanitary sewage.

6.1.5.2 Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

6.1.6 Asbestos and Asbestos Materials: Asbestos means actinolite, amosite, antophyllite, chrysotile, crocidolite, and tremolite. Asbestos material means asbestos or any material containing asbestos such as asbestos waste, scrap, debris bags, containers, equipment, and asbestos-contaminated clothing consigned for disposal. Friable asbestos material means any material that contains more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure.

6.1.7 Oily Waste: Includes petroleum products and bituminous materials.

6.1.8 PCB (Polychlorinated Biphenyls): Toxic and non-biodegradable materials used extensively under trade names, such as Pyranol or Askarel, as insulating cooling fluids in capacitors and transformers.

6.1.9 Hazardous Material (HM): Chemicals defined by OSHA 29 CFR 1915.1200 or under the U.S. Department of Transportation (DOT) regulations (Title 49 CFR Parts 100 through 199) which are determined by the Secretary of Transportation to present risks to safety, health, and property during transportation. The DOT regulations include requirements for shipping papers, package marking, labeling, transport vehicle placarding, and training of personnel handling hazardous materials.

6.1.10 Hazardous Substance: Substances defined under the Clean Water Act and CERCLA as chemicals which are harmful to aquatic life or the environment and are regulated, if spilled or otherwise released to the environment. The EPA has designated "reportable quantities" for each hazardous substance under CERCLA. If an amount equal to or greater than the reportable quantity of a hazardous substance is released to the environment, that spill must be reported.

6.1.11 Hazardous Waste (HW): Substances which are hazardous and have been discarded are regulated as hazardous waste under RCRA or State Health and Safety Codes and their implementing regulations. A waste is hazardous if it meets certain levels of reactivity, ignitability, corrosivity, or toxicity, or is otherwise listed as a hazardous waste in Title 40 CFR Part 261 or in the respective State Health and Safety Code or Code of Regulations.

6.1.12 Paint Containing Lead: Paint or other similar surface coating material containing detectable levels of lead or lead compounds. The definition for Paint Containing Lead is the same as that for lead-based paint. Definitions for lead-based paint found in other documents, do not apply to work under this contract.

6.1.13 Post-consumer Material: A material or finished product that has served its intended use and has been diverted or recovered from waste destined for disposal, having completed its life as a consumer item. Post-consumer material is a part of the broader category of "recovered material."

6.1.14 Recovered Material: Waste materials and byproducts which have been recovered or diverted from solid waste including post-consumer material, but such term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

## **6.2 APPLICABLE REGULATIONS**

6.2.1 The statutes and regulations listed in the References section of these General Requirements form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

## **6.3 TEST RESULTS**

6.3.1 Submit all test results taken as required by Section 6 of the General Requirements to the Contracting Officer or COR.

## **6.4 PERMITS & CERTIFICATES**

6.4.1 Submit copies of all permits and certificates required for performance of this contract at the arrival conference.

## **6.5 HAZARDOUS MATERIAL IDENTIFICATION**

6.5.1 Submit Material Safety Data Sheets (MSDS) for any materials defined as hazardous under the most current revision of 29 CFR 1910.1200. One copy of each MSDS shall be submitted to the Contracting Officer's Representative no later than the delivery date of the product. Two copies shall be submitted to the Contracting Officer.

## **6.6 KNOWN HAZARDS**

6.6.1 (See note in paragraphs 6.9.1.6 and 6.9.1.7 for required contract proposal hazard assumptions.):

6.6.2 The Coast Guard has reason to believe that PCB's may be found, although not exclusively, in the following locations : non-armored electrical cable manufactured prior to 1982 (typically grey PVC jacketed cable), and in "Chromelock Tape" which may be used with some soft patches, sheathing, pipe hangers and lap-riveted joints

6.6.3 The Coast Guard has reason to believe that asbestos may be found, although not exclusively, in the following locations: Wiring and piping insulation throughout the cutter.

6.6.4 The Coast Guard has reason to believe that lead paint may be found, although not exclusively, in the following locations :Primers throughout the cutter.

## **6.7 SUBMITTALS**

6.7.1 Environmental Management Plan: The Contractor shall have a written compliance program (the plan) outlining how the Contractor handles hazardous materials, petroleum products, hazardous substances, and hazardous waste. The plan shall comply with all local, state, and federal laws and regulations when handling hazardous materials and hazardous or other wastes. For work involving the hazards of lead, the compliance

program shall be in accordance with 29 CFR 1915.1025. The program shall include, but is not limited to, the following elements as appropriate: a general storage site plan, methods used to analyze whether generated material (blasting debris, paint waste, etc.) is hazardous, any hazardous waste licenses and permits, air district permits, spill response plans (see paras. 27.14 and 27.15), any permits required by the National Pollutant Discharge Elimination System, 33 U.S.C. 1342, air district permits, noise control plan, identification of hazardous waste and material. The Coast Guard has the right to require removal from the contract any subcontractor whose performance fails to comply with these and any other environmental laws and regulations or who fails to provide appropriate evidence of compliance with them. NOTE: a general format outline of an acceptable Environmental Management Plan can be found on our internet site:

[http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/files/procurement/ENVIRONMENTAL\\_MANAGEMENT\\_PLAN.doc](http://www.uscg.mil/mlcpac/mlcp/Eng%20Support/mlcpv/files/procurement/ENVIRONMENTAL_MANAGEMENT_PLAN.doc).

6.7.2 Asbestos Documentation <if required>

6.7.3 Job Specific Statements of Procedures <if required>

## **6.8 STRICT COMPLIANCE WITH REGULATIONS AND STATUTES**

6.8.1 Provide and maintain environmental protection during the life of the Contract to control pollution or to correct conditions that develop during performance of the contract. Comply with all Federal, State, and local laws and regulations pertaining to water, air, and noise pollution.

## **6.9 CONTROL & DISPOSAL OF WASTES**

6.9.1 With the exception of materials specifically indicated or specified to be salvaged for reuse, and turned over to the Government, all non-hazardous wastes and demolished materials become the Contractor's property and shall be removed from the job site daily. Shipboard, store hazardous waste in corrosion resistant containers labeled to identify type of waste and date filled. Comply with 49 CFR 178 container guidelines.

6.9.1.1 Hazardous Waste Disposal (for work performed at a Contractor's facility): All hazardous waste generated by work under this contract is the responsibility of the Contractor. The Contractor is the generator of all contract-generated hazardous waste and shall use its facility's EPA generator ID number for management, transportation, and disposal of said hazardous waste. The Contractor's hazardous waste handlers shall comply with applicable parts of 40 CFR 262. The Contractor shall package all contract generated hazardous waste in 49 CFR compliant containers and transport/dispose of the waste in accordance with all other Federal, state, and local laws and regulations. The designated waste shall be disposed of at a state and/or Federally approved and permitted Hazardous Waste Treatment, Storage and Disposal Facility (TSDF). destination TSDF shall be designated at the arrival conference.

6.9.1.2 HM/HW Spill Response: Spill response shall follow the requirements of 29 CFR 1910. The Contractor shall be responsible for all Contract/Availability related spills. This contractual authority to assume cleanup direction is in addition to, and does not affect, the Coast Guard's regulatory authority to initiate federal spill control and cleanup operations under the National Oil and Hazardous Substances Contingency Plan, 40 CFR 300. Any Contractor provided spill response deemed inadequate by the Coast Guard will then come under the direction of the Coast Guard and the Coast Guard will be reimbursed by the Contractor for their expenses. Contractor's responsibility includes removal of spill response waste from the work site upon completion of the cleanup. The transfer of hazardous waste shall be handles as noted in 6.9.1.1. For oil and hazardous material spills which are reportable under Federal, State, and local laws and regulations, the Contractor shall immediately notify the vessel's Hazardous Waste Coordinator and Contracting Officer along with the required agencies.

6.9.1.3 Manage and dispose of petroleum products and petroleum contaminated water in accordance with procedures meeting Federal, State, and local laws and regulations. Comply with 40 CFR 761 for removal and disposal of PCB containing articles.

6.9.1.4 Refrigerants: The Contractor shall at all times adhere to the requirements of the Clean Air Act, 42 U.S.C. 7401 et seq., and any implementing regulations. The Contractor may not knowingly vent or otherwise knowingly release or dispose of any Class I or Class II refrigerants, as defined in 42 U.S.C. 7671a, into the environment. The Contractor shall ensure that when servicing small appliances (refrigerators, freezers, water coolers etc.), high pressure systems, or low pressure systems, all servicing and recovery requirements for the appropriate level of equipment are met. Whenever reclaimed refrigerant is used, the Contractor shall provide the Coast Guard Inspector proof that the refrigerant meets the relevant standard of purity. All Contractor servicing technicians must have obtained the required level of Environmental Protection Agency certification necessary to service the equipment (i.e. small appliances, high pressure systems, low pressure systems, etc.) in question.

6.9.1.5 Lead and Chromium: The Contractor shall assume all paint removal operations involve lead-based paint. An adequate survey of the work-area has not been accomplished by the Coast Guard to determine the extent of lead-based paint. The Contractor will be responsible for determining the percentage of operations which involve lead-based paint. Prior to accomplishing any work involving the removal of lead-based paint, the Contractor shall contact the COR or the Contracting Officer and provide copies of the sample results.

6.9.1.5.1 Paint Containing Lead: The Contractor shall comply with all applicable Federal, State, and local laws and regulations regarding paint containing lead, when engaging in lead-based paint activities, or when addressing lead-based paint hazards and disposal. Whenever this contract provides more than one standard for regulating lead-based paint, the Contractor shall comply with the most restrictive law or regulation. Applicable laws or regulations include, but are not limited to: 16 CFR 1303, Ban of Lead-Containing Paint; 29 CFR 1910, Occupational Safety and Health Standards for General Industry; 29 CFR 1915.1025, Lead for Shipyard Employment; 29 CFR 1926.62, Occupational Safety and Health Standards for Construction Industry; 15 U.S.C. 2601, Toxic Substances Control Act, et seq. and the Residential Lead-Based Paint Exposure Reduction Act.

CAUTION: The inorganic zinc primer specified in COMDTINST M10360.3, Coatings and Color Manual may contain concentrations of lead, but not in excess of 0.06% by weight. COMDTINST M10360.3 specifies inorganic zinc for interior steel surfaces including machinery decks, voids, chain lockers, inaccessible areas, and fire zone bulkheads; exterior steel surfaces including weather decks, work areas, deckplates, superstructures, stack casings, freeboards, and inaccessible areas; and steel items subject to condensation. Additionally, zinc in certain concentrations is a hazardous waste in California. Debris from zinc paint removal may be regulated. See the California Code of Regulations, Title 22, section 66261.24.

6.9.1.5.2 Lead-Contaminated and Chromium-Contaminated Material Abatement: The Contractor shall not release lead, lead-contaminated or chromium-contaminated materials into the environment. Periodic air monitoring (as appropriate) for lead and/or chromium in the worker's breathing zone shall be performed during the course of any abatement work involving lead/chromium-containing materials. Submit results to the COR or Contracting Officer for review. The Contractor shall dispose of materials containing lead or chromium and likewise contaminated materials in accordance with any applicable hazardous waste laws and this contract. When handling and storing lead or chromium contaminated materials, the Contractor shall be responsible for compliance with 42 U.S.C. 9601-9675, 42 U.S.C. 6901-6991, and all other applicable Federal, state, and local environmental laws and regulations.

**NOTE:** The Contractor shall propose a price for this effort as if lead abatement procedures will be required for all paint removal requirements. No equitable adjustment will be granted to any contractor for the removal of any paint containing lead or chromium.

6.9.1.6 Asbestos: The Contractor shall assume all removal work involves asbestos. Prior to commencing work, the Contractor shall obtain all required samples to determine the levels of asbestos present (if any) and the personnel protection required. Copies of the sample results shall be provided to the COR prior to commencing work. In no case, will any asbestos be cut or otherwise treated without compliance with the Coast Guard Asbestos Exposure Control Manual (COMDTINST M6260.16). In addition to COMDTINST M6260.16, any asbestos abatement operations must comply with all federal, state and local laws and regulations including 40 CFR 61.150 and 29 CFR 1915.1001; National Emission Standards for Asbestos. Provide all notices to the EPA as required by 40 CFR 61.145 and other applicable state and local agencies prior to commencing asbestos removal work. Whenever this contract provides more than one standard for asbestos abatement, the Contractor must comply with the most

restrictive law or regulation. Note that COMDTINST M6260.21 requires full compliance with OSHA Standards in 29 CFR 1910.1200. The Contractor shall provide forty-eight hours written notice to the Contracting Officer before commencing any asbestos work. Should there be any question as to the existence of asbestos in any material which may be disturbed, the Contractor is responsible for conducting hazard evaluations pursuant to OSHA requirements. The Contractor shall provide the COR with a description, location, and analysis results for all materials samples taken during personnel hazard evaluations before work commences in the affected area. Additionally, asbestos is a hazardous waste in California under certain circumstances, potentially triggering the provisions of sections 6.9.1.1 and/or 6.9.1.2 of this specification. See the California Code of Regulations, Title 22, section 66261.24

**NOTE:** The Contractor shall propose a price for this effort as if asbestos abatement procedures will be required for all removal work. No equitable adjustment will be granted to any contractor for the removal of any asbestos.

**6.9.1.7 VOLATILE ORGANIC COMPOUNDS (VOC)–REGULATIONS GOVERNING VOC EMISSIONS AND SOLVENT CONTENT IN PAINTS, COATINGS, SOLVENTS, ADHESIVES AND CLEANERS:** The Contractor is required to comply with local VOC laws and regulations and shall have an acceptable VOC compliance plan. The plan shall demonstrate that the use of paints, solvents, adhesives and cleaners comply with local VOC laws and regulations. All required permits shall be obtained, prior to starting work involving VOC's, in the air quality district in which the work will be performed. The compliance plan shall be submitted by the Contractor to the COR prior to the start of work. An acceptable compliance plan shall contain, as a minimum: a listing of each material subject to restrictions in the air quality management district in question, the rule governing its use, a description of the actions which the Contractor will use to comply with the laws and regulations, and any changes in the status of compliance during the life of the contract. Alternatively, if no materials are subject to the restrictions in the air quality management district where the work will be performed, or if there are no restrictions, the compliance plan shall so state.

**6.9.1.8 PCB (Polychlorinated Biphenyl) Containing Materials:** PCBs (which are known to be hazardous to human health) may be present in various locations on board Coast Guard Vessels. These locations include those which contain non-armored electrical cable manufactured prior to 1982 (typically grey PVC jacketed cable), and in "Chromelock Tape" which may be used with some soft patches, sheathing, pipe hangers and lap-riveted joints. If the presence of PCBs is known or suspected in any area of work, comply with the Toxic Substances Control Act (TSCA), 15 U.S.C. 2601-2692; 40 CFR 761 et seq.; COMDTINST M 16478.1, Hazardous Waste Management Manual; COMDTINST M16478.2, Procurement, Handling, and Disposal of Polychlorinated Biphenyls; and all other applicable federal, state, and local laws and regulations related to handling and disposition.

## **6.10 DUST CONTROL**

6.10.1 Keep dust down at all times, including non-working hours, weekends, and holidays. No dry power brooming is permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing is permitted only for cleaning non-particulate debris, such as steel reinforcing bars. No abrasive blasting is permitted unless dust is confined. No unnecessary shaking of bags is permitted where bagged material is used.

## **6.11 NOISE**

6.11.1 Make the maximum use of "low-noise-emission products" as certified by EPA and described at 40 CFR Part 204. Comply with applicable portions of the Noise Control Act (NCA). The Contractor is responsible for complying with all other Federal, state, and local noise control laws and regulations.

## **6.12 OIL SPILL PLANNING**

6.12.1 (Applicable to fixed or mobile facilities transferring oil, including fuel and oily wastes, to or from a vessel with a capacity 10,500 gallons or more.) Transfers of any amount of "oil", as defined by 33 CFR 154.105, between the vessel and the Contractor's facility, or a mobile tank facility (subcontracted or otherwise arranged by the Contractor) are subject to the oil spill response plan requirements of 33 CFR 154.1010 et seq. The Contractor shall have an approved and current Facility Response Plan for any fixed or mobile facility transferring oil to or from the

vessel whether the transfer is done by the Contractor or Subcontractor. A current USCG MSO COTP-approved Facility Response Plan per 33 CFR Section 154.1017 will be considered acceptable in meeting this requirement.

6.12.2 Similarly the Contractor shall have any other applicable Facility Response Plans, required by federal, state, or local requirements. The required plans shall be made available for review by the COR at the arrival conference (See para 3.3)..

### **6.13 USE OF RECOVERED MATERIALS**

6.13.1 Vendors shall to the greatest extent possible and at no additional cost to the Coast Guard use recovered materials that meet existing performance standards when performing work under this specification. It is the Government's policy to use, in a cost-effective manner, products composed of the highest percentage of recovered materials practicable without adversely affecting performance requirements or exposing vendor employees to undue hazards from the recovered materials.



## **ITEM 1: TANKS (FUEL) CLEAN, INSPECT AND PRESERVE**

MI\_12311\_RRY\_0207\_230

### **1 SCOPE**

The intent of this item is to clean and inspect the Fuel Tanks.

Government Furnished Property: NONE

### **2 REFERENCES**

Coast Guard Drawings:

82-TE 103-1, Rev B, Booklet of General Plans

Applicable Documents:

SAE-AMS-C-6183, Rev -; Cork and Rubber Composition Sheet for Aromatic Fuel and Oil Resistant Gaskets, 12/18/1998

[MIL-PRF-16173, Rev E, 1/6/1993; Corrosion Preventive Compound, Solvent Cutback, Cold-Application](#)

### **3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

3.1 GENERAL – The concerned fuel tanks are listed in Table 3.1.A. See the CG Dwg referenced above for the location and arrangement of the designated tanks.

**Table 3.1.A**

<b>Tank Number</b>	<b>Contents</b>	<b>Capacity (gallons)</b>	<b>Low Suction (gal)</b>	<b>Estimated Contents at Availability Start</b>
1-150-0-E	Diesel Oil	100	50	100
01-132-1-F	Diesel Oil	250	50	200
3-112-1-F	Diesel Oil	19,600	91	91
3-112-2-F	Diesel Oil	19,600	91	91
3-154-1-F	Diesel Oil	9,870	750	750
3-154-2-F	Diesel Oil	9,870	750	750

### **3.2 INTERFERENCES**

3.2.1 The Contractor shall remove all remaining fuel with the exception of the Emergency Diesel Generator Service tank, 1-150-0-E, which shall be left full, and shall assume the Cutter will arrive with the Tanks at the level stated in the column “Estimated Contents at Availability Start”. The cost/credit of the disposal of fuel above or below these levels may be the subject of a Contract Change.

**NOTE:** Tanks 3-112-0-F and 3-154-0-F will be pressed up full, and are not to be opened or inspected under this item.

3.2.2 In the presence of the Coast Guard Inspector, inspect and operationally test all affected systems and equipment to document the original condition. The Contractor shall submit a CFR noting any discrepancies in equipment and system operation.

3.2.3 Tag-Outs – Secure, isolate, and tag-out all affected mechanical, piping, and electrical systems in accordance with the General Requirements.

### **3.3 SUPPORT**

3.3.1 Provide adequate explosion proof lighting to illuminate the work area during cleaning and inspection.

3.3.2 While manhole covers are removed, provide barriers over any open holes in the deck to prevent personnel from falling into open manholes. Post warning signs at the forward, aft, inboard, and outboard sides of all open accesses. Warning signs shall read: “DANGER, COVER IS REMOVED.” Provide adequate lighting during night hours to illuminate hazards.

3.3.3 Notify the Coast Guard Inspector prior to opening any accesses or covers to designated tanks. Open all accesses and covers to designated tanks using non-sparking tools.

### **3.4 GAS FREE CERTIFICATION**

3.4.1 Ventilate the designated tanks in accordance with the General Requirements to obtain gas free certification.

3.4.2 Gas free and certify the affected compartments/tanks in accordance with the General Requirements. All affected compartments/tanks must be certified as “Safe for Personnel – Safe for Hotwork” for the duration of work performed on this item.

3.4.3 Gas Free Certificates indicating the current status of each compartment/tank shall be posted on the Quarterdeck and at each open access to the compartments/tanks. Provide one copy to the Coast Guard Inspector.

### **3.5 TANK CLEANING**

3.5.1 Plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug accountability log outside the tank(s) to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure.

3.5.2 Remove and dispose of all residual water, sludge, rust, marine or fungus growth, and foreign material from the tanks.

**3.6 INSPECTION** – Inspect the condition of the tanks in the presence of the Coast Guard Inspector. Specific items which shall be inspected include but are not limited to: coating system, structural members, tank plating, vents, striker plates, pipes, pipe hangers, and tank access plates. Submit a CFR for each tank documenting the results of inspections.

**3.7 PRESERVATION**–Lightly coat the interior of the tanks with MIL-PRF-16173, Class II, grades 2, 3, 4 or 5.

### **3.8 RESTORATION**

3.8.1 Remove all plugs, tools, and foreign objects from the tanks prior to reinstalling the tank access covers. The Coast Guard Inspector will conduct a final inspection of the tanks to verify that all tools, plugs, and foreign objects have been removed.

3.8.2 Upon verification from the Coast Guard Inspector reinstall the tank access covers. Install new gaskets conforming to MIL-PRF-1149. Install new cotton grommets on each stud between the access cover and the washer.

3.8.3 Ensure that all gasket surfaces are free from dirt and rust prior to reinstalling the gasket and tank cover.

3.9 CLEARING TAGS – Restore all affected systems and clear tags in accordance with the General Requirements.

3.10 Coordinate all inspections with the designated Coast Guard Inspector to minimize production delays.

## **ITEM 2: TANKS (WATER) CLEAN AND INSPECT**

MI\_12314\_RRY\_0207\_230

### **1 SCOPE**

The intent of this item is to clean and inspect the Potable Water Tank(s).

Government Furnished Property: NONE

### **2 REFERENCES**

Coast Guard Drawings:

82-TE 103-1, Rev B, Booklet of General Plans

Applicable Documents: NONE

### **3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

3.1 GENERAL – The concerned water tanks are listed in Table 3.1.A. See the CG Dwg referenced above for the location and arrangement of the designated potable water tanks.

**Table 3.1.A**

<b>Cutter</b>	<b>Tank Number</b>	<b>Contents</b>	<b>Capacity (gallons)</b>	<b>Low Suction (gal)</b>	<b>Expected Contents at Availability Start</b>
WMEC	3-186-0-W	Potable Water	8,370	7	1500
WMEC	3-186-1-W	Potable Water	3,216	35	3600
WMEC	3-186-2-W	Potable Water	3,216	269	3600
WMEC	3-8-0-W	Potable Water	3600	6	Full
WMEC	3-24-0-W	Potable Water	6100	86	Full
WMEC	2-0-0-W	Ballast Water	XXXX	XXXX	Empty

#### **3.2 INTERFERENCES**

3.2.1 The Contractor shall remove all remaining water, and shall assume the Cutter will arrive with the Tanks at the level stated in the column “Estimated Contents at Availability Start”. The cost/credit of the disposal of water above or below these levels may be the subject of a Contract Change.

3.2.2 In the presence of the Coast Guard Inspector, inspect and operationally test all affected systems and equipment to document the original condition. The Contractor shall submit a CFR noting any discrepancies in equipment and system operation.

3.2.3 Tag-Outs – Secure, isolate, and tag-out all affected mechanical, piping, and electrical systems in accordance with the General Requirements.

### **3.3 SUPPORT**

3.3.1 Provide adequate explosion proof lighting to illuminate the work area during cleaning and inspection.

3.3.2 While manhole covers are removed, provide barriers over any open holes in the deck to prevent personnel from falling into open manholes. Post warning signs at the forward, aft, inboard, and outboard sides of all open accesses. Warning signs shall read: "DANGER, COVER IS REMOVED." Provide adequate lighting during night hours to illuminate hazards.

3.3.3 Notify the Coast Guard Inspector prior to opening any accesses or covers to designated tanks. Open all accesses and covers to designated tanks using non-sparking tools.

### **3.4 GAS FREE CERTIFICATION**

3.4.1 Ventilate the designated tanks in accordance with the General Requirements to obtain gas free certification.

3.4.2 Gas free and certify the affected compartments/tanks in accordance with the General Requirements. All affected compartments/tanks must be certified as "Safe for Personnel – Safe for Hotwork" for the duration of work performed on this item.

3.4.3 Gas Free Certificates indicating the current status of each compartment/tank shall be posted on the Quarterdeck and at each open access to the compartments/tanks. Provide one copy to the Coast Guard Inspector.

### **3.5 TANK CLEANING**

3.5.1 Plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug accountability log outside the tank(s) to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure.

3.5.2 Remove and dispose of all residual water, sludge, rust, marine or fungus growth, and foreign material from the tanks.

### **3.6 POTABLE WATER PNEUMATIC TANK**

3.6.1 The concerned potable water pneumatic (pressure) tank has a 42 gallon capacity. See 82-TE 4804-4 for the location and arrangement of the designated potable water tank.

3.6.2 Contractor shall depressurize and drain the tank to the limit of the ship's installed system/valves. The Contractor shall then remove all remaining residual water, and complete the requirements of para ITEM 1:3.5 .

**3.7 INSPECTION** – Inspect the condition of the tanks in the presence of the Coast Guard Inspector. Specific items which shall be inspected include, but are not limited to: coating system, structural members, tank plating, vents, striker plates, pipes, pipe hangers, and tank access plates. Submit a CFR for each tank documenting the results of inspections.

### **3.8 RESTORATION**

3.8.1 Manhole covers shall be secured adjacent to the openings together with unused securing items.

3.9 CLEARING TAGS – Restore all affected systems and clear tags in accordance with the General Requirements.

3.10 Coordinate all inspections with the designated Coast Guard Inspector to minimize production delays.

**ITEM 3: TANKS (WASTE WATER), CLEAN & INSPECT**  
MI\_59310\_RRY\_0207\_230

**1 SCOPE**

The intent of this item is to clean and inspect the waste water tanks prior to layup.

Government Furnished Property: NONE

**2 REFERENCES**

Coast Guard Drawings:

82-TE 103-1, Rev B, Booklet of General Plans

Applicable Documents:

Naval Ships' Technical Manual, Chapter 593, Pollution Control (Relevant Sections Excerpted At the End of Specification Item)

[29CFR1915.12, Rev -; Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment](#)

**3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

**3.1 GENERAL**

3.1.1 Secure all basins, commodes, urinals and showers under item "Layup Preparations" prior to initiating this item.

3.1.2 See the CG Dwg referenced above for arrangement of the concerned work areas.

3.1.3 The contractor shall pump down the tanks listed in the Table 3.1.A below and flush the tanks with water a minimum of three (3) times.

**Table 3.1.A**

Compartment	Tank	Capacity
3-51-0-Q	Sewage Holding Tank	3000 gallons
3-52-0-Q	Grey Water Holding	300 gallons
3-63-0-E	Vacuum Collection Tank	200 gallons

**3.2 INTERFERENCES**

3.2.1 In the presence of the Coast Guard Inspector, inspect and operationally test all affected systems and equipment to document the original condition. The Contractor shall submit a CFR noting any discrepancies in equipment and system operation.

3.2.2 Tag-Outs – Secure, isolate, and tag-out all affected mechanical, piping, and electrical systems in accordance with the General Requirements.

### CAUTION

Ensure that all personnel practice careful personal hygiene to avoid contracting hepatitis and other communicable diseases when working on the sewage system. Flammable and toxic vapors may be present in sewage, grey water sludge or other tank contaminants. These vapors may be released from the tank into the compartment's atmosphere during the cleaning process. Do not leave the tank open until certified safe. Do not allow open flames, sparking electrical apparatus, electric lights, flashlights, or regular tools in or near the open tank until the tank is certified safe. During work on this item, ensure that raw sewage and sewage vapors from the piping do not contaminate adjacent compartments.

## **3.3 SUPPORT**

3.3.1 Follow procedures and precautions set forth in NSTM Chapter 593, Section 4, the relevant portions of which are appended to this specification.

NOTE: NSTM Chapter 593 references to "Gas Free Engineer" shall be taken to mean Shipyard Comptent Person or Marine Chemist. References to "Ships Force" shall be taken to mean Contractor's Personnel. Noting in these procedures shall relieve the contractor of their responsibility to comply fully and completely with 29 CFR. 1915.12. The requirements of NSTM Chapter 074, Volume 3 shall be replaced with the statutory requirements of 29 CFR. 1915.12. The requirements of NSTM Chapter 631 shall be replaced with the requirements of COMDTINST M10360.3.

3.3.2 Provide adequate explosion proof lighting to illuminate the work area during cleaning and inspection.

3.3.3 Notify the Coast Guard Inspector prior to opening any accesses or covers to tank. Open all accesses and covers to the tank using non-sparking tools.

## **3.4 GAS FREE CERTIFICATION**

3.4.1 Remove and dispose all remaining contents, clean, and ventilate as necessary to obtain gas free certification in accordance with the General Requirements. Dispose of all tank contents in accordance with local, state, and federal laws and regulations.

3.4.2 Gas free and certify the affected compartments/tanks in accordance with the General Requirements. All affected compartments/tanks must be certified as "Safe for personnel – Safe for hotwork" for the duration of work performed on this item.

3.4.3 Gas Free Certificates indicating the current status of each compartment/tank shall be posted on the Quarterdeck and at each open access to the affected compartments/tanks. Provide one copy to the Coast Guard Inspector.

3.4.4 Contractor shall take all necessary precautions to ensure that sewage contaminants are contained within the sewage treatment room.

## **3.5 TANK CLEANING**

3.5.1 Plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug

accountability log outside the tank(s) to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure.

3.5.2 Clean and protect tank level sensing units prior to general tank cleaning. Clean and wrap or cover in a manner that will not cause any damage to the sensing units during the tank cleaning process.

3.5.3 Clean all tank internal surfaces in accordance with NSTM Chapter 593. Completely clean tanks of all residual deposits.

3.5.4 Remove and dispose of all remaining residual water, sludge, marine or fungus growth, cleaning agent, and foreign material from the tank. Remove all foreign material and film from all tank surfaces. Wipe the interior of the tank dry before inspection.

3.6 INSPECTION – Inspect cleanliness and condition of the tank listed in Table 3.1.A with the Coast Guard Inspector. Inspection shall include, but is not limited to: tank plating, structural strength members, vents, pipes and pipe hangers, tank level indicators, and coating condition. Submit a CFR documenting the findings.

### **3.7 RESTORATION**

3.7.1 R remove all plugs, tools, and foreign objects from the sewage and grey water tank(s).

3.7.2 Reinstall covers in an ajar position. Package all used securing items (nuts, gaskets, etc.) and wire adjacent to opening.

3.7.3 Restore the work area to a clean condition. Spills or contamination in any area shall be washed down with hot fresh water and detergent and rinsed clean with fresh water in accordance with NSTM Chapter 593.



593-4.2.3 SEWAGE AND WASTE WATER SANITARY AND HYGIENIC PROCEDURES. The sanitary and hygienic practices described in the following paragraphs shall be adhered to.

- a. Personnel who connect or disconnect sewage transfer hoses shall not subsequently handle potable water hoses.
- b. Personnel who connect or disconnect sewage hoses shall wear rubber gloves, rubber boots, and coveralls.
- c. When performing maintenance which requires disassembly of sewage equipment or when contact with sewage is possible, rubber gloves, rubber boots, eye/faceshields and coveralls shall be worn. Before beginning maintenance, several plastic laundry-size bags shall be brought to the maintenance area. Upon completion of maintenance, the area and components shall be washed down with hot potable water and stock detergent and rinsed with seawater or fresh water. Personnel shall then move from the immediate maintenance area and remove protective clothing. Protective clothing shall then be placed in the plastic bags, with rubber boots and gloves going in one bag, and with fabric clothing going in another bag. Rubber boots and gloves shall be washed in hot potable water and stock detergent, and shall be rinsed with an approved disinfectant solution listed in the following paragraph. Fabric protective clothing may receive normal laundering. In no case shall maintenance personnel walk through living, eating, working, or any manned spaces still wearing protective clothing, boots, or gloves. Before leaving the maintenance area, personnel shall thoroughly wash hands, lower arms, and face, in that order, with hot water and soap using the wash-up facilities provided in the area.
- d. Personnel working in sewage spaces or on sewage and waste water system equipment shall not smoke, eat, or drink before a thorough wash up with hot water and soap.
- e. <deleted, irrelevant–RRY>
- f. In the event spaces become contaminated with sewage as a result of leaks, spills, or sewage system backflow, the space shall be evacuated immediately and the medical department notified of the spill. The spill area shall be secured from traffic, and the ship's Gas Free Engineer shall test the area to ensure that the atmosphere is within acceptable gas limits as described in paragraph 593–4.2.4.1.1, step b. A safety watch with respiratory protection (preferably that specified in paragraph 593–4.2.4.1.1, step c, or if unavailable, a Supplied Air Respirator/Self-Contained Breathing Apparatus (SAR/SCBA) or air-line mask) shall be posted at the compartment access during cleanup. The spilled sewage shall then be removed or washed down. Respiratory protection shall be used if the atmosphere is not within acceptable limits. If the atmosphere is within acceptable limits, cleanup may be accomplished without respiratory protection; however, respiratory protection shall be kept on hand during the cleanup. The area shall be recertified as gas free at least every two (2) hours and every hour for ambient temperatures above 32.2° C (90° F) or more frequently if deemed necessary by the Gas Free Engineer. The need for temporary ventilation shall be determined by the ship's Gas Free Engineer. A final washdown shall be accomplished with hot, potable water and stock detergent. In addition, food service spaces, berthing areas, and medical spaces shall be treated with an approved disinfectant such as NSN 6840-00-753- 4797, Disinfectant, Germicidal Fungicidal Concentrate (Phenolic Type); or NSN 6840-00-526-1129, Disinfectant, Germicidal and Fungicidal Concentrate (Iodine Type). To be effective, these agents shall be used according to the instructions printed on the labels.

**Excerpt from NSTM Chapter 593**

- g. Each time sewage transfer operations are terminated and the sewage hose is disconnected, the deck discharge connection, components, and immediate area shall be washed with hot potable water and stock detergent, and rinsed with seawater or potable water.
- h. The deck discharge connection shall be periodically checked during sewage transfer operations to ensure that the connection is intact and that an unsanitary condition is not developing.
- i. <deleted, irrelevant, RRY>
- j. <deleted, irrelevant, RRY>
- k. Bilges contaminated with sewage wastes should be pumped out, washed down with a fire hose, and pumped out again. If potable water tanks form the floor of the bilge, daily bacteriological monitoring of the water from those tanks shall be promptly initiated and continued until it is assured that sewage contamination of the tanks has not occurred. Furthermore, if the potable water system is suspected of being contaminated, the appropriate tanks should be secured until the water is determined to be safe for consumption.

593-4.2.4 SEWAGE AND WASTE WATER SYSTEM HOLDING TANK OR COMPONENTS ENTRY. Sewage and waste water system holding tanks and the associated piping systems (drain and transfer pipes) are considered Immediately Dangerous to Life or Health (IDLH) spaces. As a result, approval from the Commanding Officer is required prior to opening any sewage or waste water system holding tank or pipe. In addition, the procedures provided in the following paragraphs must be followed to open or enter sewage or waste water system holding tanks or piping system for maintenance or repair.

593-4.2.4.1 Large Holding Tank Entry. Procedures for inspection and maintenance of sewage systems requiring large holding tank (CHT systems) entry or the removal of components are discussed in the following paragraphs. No personnel shall attempt this maintenance unless they have thoroughly read these procedures and the safety precautions outlined in paragraph 593-4.2.1. Inspection and maintenance requiring entry into submarine, DD-963/DDG 993 VCHT and smaller (receiving station, etc.) sewage holding tanks shall follow procedures in paragraph 593-4.2.4.1.3.

#### **WARNING**

**Permanent metal internal holding tank access ladders in holding tanks shall not be used. Temporary ladders and safety harnesses secured to a point external to the holding tank shall be used by all personnel accessing holding tanks, except as noted below. If permanent metal internal holding tank access ladders must be used due to the nature of work or design of the holding tank, the entire permanent metal internal access ladder assembly shall be inspected, while using a safety harness secured to a point external to the holding tank, to verify structural integrity prior to use, and all personnel using the permanent metal internal access ladder after inspection shall use a safety harness secured to a point external to the holding tank.**

**Excerpt from NSTM Chapter 593 (Continued)**

593-4.2.4.1.1 Inspection and Maintenance Requiring Holding Tank Entry. Sewage holding tanks shall be cleaned and inspected approximately every three (3) years, or when holding tank must be entered for other required repairs. Cleaning of the holding tank shall be accomplished as outlined in the following paragraphs, <...Deleted, irrelevant...> The holding tank inspection shall be conducted only at a suitable facility where proper industrial assistance is available. Arrangements shall be made in advance with the Facility Production Engineering, Gas Free Engineering, and Industrial Hygiene Departments, or their equivalents, for the services of a qualified Gas Free Engineer and for design and installation of the necessary temporary ventilation. <...Deleted, irrelevant...>

**WARNING**

**Ship force shall not enter the sewage holding tank or open the manhole access at any time unless this is done at a suitable industrial facility and unless all requirements cited in paragraphs 593–4.2.4 have been met or the holding tank has been cleaned and certified gas free by the Gas Free Engineer in accordance with NSTM Chapter 074, Volume 3 (Gas Free Engineering) . If problems develop that prevent sewage system operation and require holding tank access for correction, divert all sewage and waste drains overboard and secure the sewage system until proper facilities are available. Repair the sewage system at the earliest opportunity.**

- a. Before proceeding, the Production Engineering and Industrial Hygiene Departments, or their equivalents, shall ensure that the exhaust ventilation, approved by the ship's Gas Free Engineer and discharging to the weather, is installed as close as possible to the holding tank access or the intended holding tank opening. The wash down and Gas Free procedures in this paragraph and paragraph 593–4.2.4.1.2, shall be observed as follows:

- 1 Secure all sanitary spaces draining to affected tank if in port. Divert all sewage and waste drains overboard if at-sea. Provide safety tags for valves as required.
- 2 Secure or isolate all heads, fountains, or drains as required.
- 3 Ensure valve in the holding tank overflow discharge line is open.
- 4 Operate aeration system if available.
- 5 Pump out the holding tank completely. When pump suction is lost, turn off pump.
- 6 Open holding tank wash down valve and overboard discharge. Secure wash down
- 7 Repeat steps 5 and 6.
- 8 Repeat step 5.
- 9 Secure air supply.
- 10 Secure sewage pump isolation valves.

**WARNING**

**Toxic gases may exist in holding tank. Do not open until certified GAS FREE. Observe no-smoking regulation. Do not allow open flame, ordinary electric lights, flashlights, regular tools, or sparking electrical apparatus in or near open holding tank until safety is certified by Gas Free Engineer.**

**Excerpt from NSTM Chapter 593 (Continued)**

- b. The holding tank shall be immediately inspected by the Gas Free Engineer, observing the precautions outlined in the following paragraph, and a GAS FREE certificate shall be issued as required by **NSTM Chapter 074, Volume 3** . Particular attention shall be paid to hydrogen sulfide, explosive gases, carbon dioxide, and oxygen levels. If the holding tank is not gas free, close the holding tank and repeat the wash down procedure outlined in paragraph [593-4.2.4.1.1, step a.](#) until the holding tank can be certified GAS FREE and safe. Acceptable gas limits are:
- 1 Hydrogen sulfide — less than 10 parts per million
  - 2 Carbon dioxide — less than 5,000 parts per million
  - 3 Oxygen — shall be at least 20 percent
  - 4 Explosive gases — below 10 percent of lower explosive limit
- c. Holding tanks shall be opened immediately after first acceptable GAS FREE measurements are made, observing the precautions outlined in this paragraph. Spectacle flanges should be utilized (if installed) in the sewage and wastewater inlet lines to the holding tank to prevent inadvertent collection of sewage and waste water. If spectacle flanges are not available, blank flanges should be installed in place of all sewage and waste water inlet line isolation valves upstream of the holding tank. Recertification of holding tanks shall be performed at least every four (4) hours until sludge has been removed at which time the interval may be extended to eight (8) hours. It shall be recognized that even though a holding tank may be certified GAS FREE, toxic gases may remain in the sludge blanket and could be released when the blanket is disturbed. Before opening the holding tank in any manner (for example, by removal of manhole access covers or liquid level sensor flanges), or removing any valves or components below the highest level of the sewage holding tank overflow, all personnel in the area at the time the opening is made shall wear either of the following:
- 1 A full facepiece, Supplied Air Respirator/Self-Contained Breathing Apparatus (SAR/SCBA) operated in the pressure-demand mode.
  - 2 A full facepiece air-line respirator operated in the pressure demand mode and equipped with an auxiliary self contained air supply that contains sufficient air to ensure escape.
- If the ship is underway and if required by an emergency, a SAR/SCBA may be used if approved by the Commanding Officer.
- A second person shall be on hand to lend assistance as required. All personnel required to wear respiratory protection shall be medically qualified and trained in accordance with local requirements prior to using the protection equipment. Personnel shall also ensure that exhaust ventilation approved by the ship's Gas Free Engineer is installed and operating before opening the holding tank in any way.
- d. The Gas Free Engineer shall establish and ensure ventilation requirements are maintained in accordance with **NSTM Chapter 074, Volume 3, Section 21** .
- e. Once forced ventilation of the holding tank has been established for 30 minutes, the Gas Free Engineer shall re-test the space outside the holding tank to determine whether respiratory protection is still required outside the holding tank.
- f. Before the holding tank is entered, clean (remove sludge blanket, if required) as thoroughly as possible, using a firehose or manually-controlled high pressure water cleaning nozzle. Care must be taken not to damage internal holding tank equipment such as level sensors. Open the pump isolation valves and pump out holding tank as necessary during the cleaning procedure. Close the pump isolation valves and secure the pumps after completion of this procedure.

- g. Measurements shall be repeated by the Gas Free Engineer after the accomplishment of paragraph 593–4.2.4.1.1, step f. When the holding tank is certified GAS FREE and safe, personnel may enter, using respiratory protection as specified in paragraph 593–4.2.4.1.1, step c and the internal metal holding tank access ladder precautions as specified in paragraphs 593–4.2.4.1.1, step h and 593–4.2.4.1.1, step i. Personnel entering the holding tank shall wear coveralls, boots, gloves, and head covering. If the holding tank is found to be unsafe, continue ventilation until it can be certified GAS FREE and safe. A safety harness and tending line shall be used if only a single person enters the holding tank. If more than one person enters the holding tank, the tending line shall not be used, but personnel shall keep in constant sight or touch of one another. Station a safety watch with a spare respirator outside the holding tank to lend assistance if required.
- h. A temporary ladder and a safety harness secured to a point external to the holding tank shall be used to access sewage holding tanks when the permanently installed access ladders are metallic in construction. If the temporary ladder is sufficient to perform all required tasks, the permanent metal access ladder shall not be used. If use of the permanent metal access ladder is required, the temporary ladder and safety harness shall be used to gain access to and verify the condition of the permanent metal access ladder in accordance with paragraph 593–4.2.4.1.1, step i. If the design of the sewage holding tank prevents use of temporary ladders, the existing permanent metal access ladder can be used with the following precautions: an approved safety harness secured to a point external to the holding tank shall be used, appropriate safety procedures shall be followed by all personnel, and the permanent metal access ladder assembly shall be inspected in accordance with paragraph 593–4.2.4.1.1, step i prior to continued use.
- i. Inspection/testing of permanent metal access ladder assemblies shall include visual inspection of each ladder section, all fasteners and supports, and load testing, if required, of the ladder assembly as described below. This inspection and testing shall take place from temporary ladders using a safety harness secured to a point external to the holding tank or from the permanent metal access ladder, section by section, top to bottom, using an approved safety harness secured to a point external to the holding tank.
- 1 Visual inspection—Visually inspect all ladder component (stringers, treads, fasteners, welds) for deterioration or corrosion. Any components found to have significant areas of corrosion or deterioration shall cause the ladder to be taken out of service until the problem component is repaired or replaced.
  - 2 Dissimilar metal component inspection—Inspect ladders and fasteners to identify any dissimilar metals. Carbon steel fasteners should not be used with stainless steel ladders and vice versa. Although new or replacement stainless steel installations should use identical alloys for both ladders and fasteners, use of 304 or 316 stainless steel fasteners with any existing 304 or 316 stainless steel ladder is acceptable. This inspection can be accomplished using a magnet. Annealed or condition a 304 and 316 stainless are nonmagnetic or weakly magnetic. Both may appear black after exposure to the environment. Any dissimilar material components shall be replaced immediately or scheduled for replacement at next industrial period requiring holding tank repairs.
  - 3 Load test—A load test can be performed if deemed necessary. For reference, treads on newly manufactured ladders shall be load tested to 250 pounds.

**Excerpt from NSTM Chapter 593 (Continued)**

- j. Upon entering holding tank, personnel shall accomplish the following:
- 1 Inspect tank for sludge deposits. If minor sludge deposits are present, physically remove the deposits and exit the tank. Then proceed to paragraph 593–4.2.4.1.1, step k.

- 2 If major deposits remain, exit tank and accomplish the cleaning procedure specified in paragraph 593–4.2.4.1.1, step f. Repeat the cleaning procedure and recertify tank GAS FREE (paragraph 593– 4.2.4.1.1, step g.) until deposits can be physically removed. Then proceed to paragraph 593–4.2.4.1.1, step l.
- k. Holding tank shall then be rechecked by the Gas Free Engineer. If the holding tank is found unsafe, continue ventilation until holding tank can be recertified GAS FREE and safe.
- l. Once all sludge has been removed and the holding tank has been recertified GAS FREE, work can continue in the holding tank without air-line masks or SAR/SCBAs provided ventilation is continued and the Gas Free Engineer approves.
- m. Inspect holding tank coating, level sensors, aeration and washdown systems, and anodes (where installed). If re-coating is necessary, it shall be done with coating conforming to **NSTM Chapter 631** . Where the cement filler used to fill pockets or areas where sewage can collect, has broken away, cement shall be replaced with deck covering latex cement conforming to MIL-D-21631. This cement is not intended to be a covering for the holding tank bottom, but only to fill pockets or areas which would not drain properly as the holding tank is pumped down. Coating shall be applied according to **NSTM Chapter 631** . Where a cathodic protection system is installed, replace anodes if more than one half the original anode thickness has been lost since the last holding tank inspection.
- n. No welding or hot work shall be performed on the holding tank, inside or outside, without a Gas Free Engineer first determining that the holding tank is safe for hot work. After welding is complete, the coating shall be inspected for heat damage and repaired as necessary.

**WARNING**

**Sewage and waste water holding tanks may contain toxic or explosive gases. No personnel shall attempt sewage system maintenance unless they have thoroughly read and become familiar with the safety requirements and precautions outlined in paragraph 593–4.2.4 and unless they follow the specific procedures for this maintenance outlined in this manual and the applicable MRCs. If these procedures cannot be followed due to some equipment malfunction, this maintenance shall be deferred until a suitable industrial facility becomes available. If necessary, deactivate the system and divert drains overboard until such facilities are available.**

**Excerpt from NSTM Chapter 593 (Continued)**

## **ITEM 4: HULL PLATING, UNDERWATER BODY PRESERVE, LAYUP**

MI\_63130\_RRY\_0207\_230

### **1 SCOPE**

The intent of this work item is to prepare, prime and coat the underwater body with anti-corrosive paint. Certain portions will be taken down to bare metal, while the bulk of the hull will receive 3 coats of epoxy anti-corrosive to encapsulate the existing antifouling and preserve the hull from corrosion during an extended layup..

Government Furnished Property: NONE

### **2 REFERENCES**

Coast Guard Drawings:

82-TE 103-1, Rev B, Booklet of General Plans

Applicable Documents:

[COMDTINST M10360.3C, Coatings and Colors Manual](#)

[MIL-P-24647, Rev D; Paint System, Anticorrosive and Antifouling, Ship Hull, 2/16/2005](#)

[MIL-PRF-24635, Rev C, 6/6/2003; Enamel, Silicone Alkyd Copolymer](#)

[The Society for Protective Coatings \(SSPC\)-SP 1, Solvent Cleaning, 11/1/1982](#)

[The Society for Protective Coatings SSPC-SP 7/NACE No.4, Brush-Off Blast Cleaning](#)

[The Society for Protective Coatings \(SSPC\)-SP 10/NACE No.2, Near-White Blast Cleaning, 9/1/2000](#)

[The Society for Protective Coatings \(SSPC\)-SP 12/NACE No.5, Surface Preparation and Cleaning of Steel & Other Hard Materials by High and Ultrahigh Pressure Water Jetting Prior to Recoating, 7/1/2002](#)

[The Society for Protective Coatings \(SSPC\)-SP VIS-1-02, Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning](#)

[The Society for Protective Coatings \(SSPC\)/NACE VIS 4/NACE No. 7, Guide and Visual Reference Photographs for Steel Cleaned by Waterjetting](#)

### **3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

#### **3.1 GENERAL**

3.1.1 For the purposes of this item the work area is defined as the entire underwater body, from the keel to the upper boottop line including . Refer to referenced CG Dwgs for arrangement of the work area.

3.1.2 The work in this item shall occur after the initial low-pressure water cleaning in Definite Item "Drydocking Accomplish" and the Coast Guard Underwater Hull Board has inspected the paint condition.

3.1.3 The Coast Guard Inspector will designate up to 250 square feet of the underwater body coating system for preparation to bare white metal during the Coast Guard Underwater Hull Board inspection. In addition to the 250 ft of failing anti-corrosive coats, all new external blanking plates shall be prepared to near white metal

### 3.2 INTERFERENCES

3.2.1 Prevent contamination or damage to the which may be damaged due to surface preparation and painting. Such areas shall be covered, taped, and otherwise protected with plastic and/or canvas. The propellers must be wrapped and left paint-free. Protect from paint and blast overspray in accordance with the General Requirements. Coordinate protection of the fathometer transducer with Definite Item, "Fathometer Transducer Renewal" if included in this package.

3.2.2 All scuppers and overboard discharges shall be plugged or connected to discharge hoses to prevent contamination of the underwater body.

### 3.3 SUPPORT

3.3.1 Provide adequate explosion proof lighting to illuminate the work area during preparation, inspection and coating.

3.3.2 The Contractor shall provide all inspection and testing equipment, including but not limited to: surface temperature thermometer, sling psychrometer, psychrometric chart, dry film paint thickness gauge, surface profile tape and spring micrometer.

3.3.3 Present the Coast Guard Inspector the Material Safety Data Sheet (MSDS) for the paint batch and the manufacturer's application procedures for the coating system.

3.3.4 Notify the Coast Guard Inspector 48 hours prior to surface preparation and the application any coatings.

### 3.4 SURFACE PREPARATION

**NOTE:** The Contractor has the option of using either high-/ultrahigh-pressure waterjetting or abrasive blasting to achieve the required surface preparation standard as described below.

NOTE: Take extra care not to damage the fiberglass covering when removing the anti-corrosive and anti-fouling layers from the shafts.

3.4.1 In the presence of the Coast Guard Inspector, measure the surface temperature and the dew point. Ensure that proper temperatures and humidity conditions exist for surface preparation.

**NOTE:** The surface temperature must be at least 5°F above the dew point during all surface preparation.

3.4.2 High-/Ultrahigh-Pressure Waterjetting (option 1):

3.4.2.1 Prepare the areas designated for anti-corrosive repair to a WJ-2 visual level in accordance with SSPC-SP 12.

3.4.2.2 In the presence of the Coast Guard Inspector, compare the surface cleanliness level of the areas prepared to a WJ-2 to SSPC VIS-4 to verify that the surface meets the required cleanliness level. If flash rusting is any more severe than light, the surface shall be re-prepared to meet this cleanliness requirement.

3.4.2.3 Prepare the areas designated for anti-fouling bonding failure repair to a WJ-4 visual level in accordance with SSPC-SP 12. The purpose of this blast is to remove all loose anti-fouling coatings and leave the well adhering anti-corrosive layers intact.

3.4.3 Abrasive Blasting (option 2):



3.4.3.1 Prior to surface preparation, remove all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants from the steel surface in accordance with SSPC-SP 1.

3.4.3.2 Prepare the areas designated for anti-corrosive repair to near white metal in accordance with SSPC-SP 10. Do not use a blasting material that contains oil or leaves an oil residue on the prepared surfaces.

3.4.3.3 Remove all dust, dirt, blast residue, grease, oil and other contaminants from the entire work area per SSPC-SP 10.

3.4.3.4 In the presence of the Coast Guard Inspector, compare the surface cleanliness level of the areas prepared to an SSPC-SP 10 to SSPC VIS-1 to verify that the surface meets the required cleanliness level.

3.4.3.5 Brush blast the areas designated for anti-fouling bonding failure repair to an SSPC-SP 7 standard. The purpose of this blast is to remove all loose anti-fouling coatings and leave the well adhering layers intact.

3.4.4 After surface preparation perform the following test/inspections (regardless of surface preparation method):

3.4.4.1 Prior to applying any paint, remove all dust and abrasive blast residue as well as grease, oil, or other contaminants from the blasted area. In the presence of the Coast Guard Inspector, visually inspect the condition of all prepared substrate. Submit a Condition Found Report.

3.4.4.2 In the presence of the Coast Guard Inspector, perform randomly located (3 measurements per 100 sqft over the first 500 sqft, and one per 1000 sqft thereafter) surface chloride check over the prepared surfaces, using the Bresle Cell Method with de-ionized water, or a suitable commercially-available salt contamination meter. Submit results to the Coast Guard Inspector. Measurements shall not exceed 3 micrograms per square centimeter.

3.4.4.3 If surface chloride measurements are greater than 3 micrograms per square centimeter, pressure (2000-3000 psi) freshwater wash the surfaces, and retest affected areas until the chloride level is reduced to below 3 micrograms per square centimeter.

3.4.4.4 In the presence of the Coast Guard Inspector, and for every 100 square feet of work area, take and record three surface profile readings from randomly selected locations. Submit results and surface profile tapes to the Coast Guard Inspector. The surface profile shall be 1.5 to 3.5 mils.

**NOTE:** Waterjetting does not provide any additional anchor profile to the steel substrate. The use of another surface preparation method may be necessary to provide the proper anchor.

3.4.5 Where new paint is to be merged into the existing paint system, provide a 3 inch wide, smoothly tapered boundary from the existing paint to the prepared metal surface.

### **3.5 COATING APPLICATION**

3.5.1 In the presence of the Coast Guard Inspector, measure the surface temperature and the dew point. Ensure that proper temperatures and humidity exist for paint application. Do not apply paint during wet weather.

**NOTE:** The surface temperature must be at least 5°F above the dew point during application of all paint.

3.5.2 Coat the entire underwater body with 3 coats, 5 mils DFT each, anti-corrosive epoxy, MIL-PRF-24647, Type 1, Class 1A, Grade C in accordance with COMDTINST M10360.3..

3.5.3 In the presence of the Coast Guard Inspector, use the dry paint gauge to verify the dry film thickness.

### **3.6 TRANSDUCER BOLT RING PRESERVATION**

3.6.1 Prepare the transducer bolt rings by lightly sanding the transducer bolt ring with 120-grit sandpaper. Ensure that all paint is removed.

3.6.2 Coat the prepared transducer bolt rings with the same coating as the surrounding underwater body. Ensure that no paint contaminates the transducer face.

3.6.3 Prevent contamination of the transducer diaphragm from paint and foreign material by installing the transducer cover and not removing it until all underwater body work has been completed.

### **3.7 WATERLINE MARKINGS**

3.7.1 Paint four (4) inch wide stripes along the waterline extending horizontally thirty six (36) inches toward midships from the bow and stern on both sides of the vessel. Markings shall be of two coats of highly visible (e.g., reflective white or international orange) Silicon Alkyd paint .A second marking stripe shall be applied approximately two feet above the waterline. The trailing edge of the rudder shall also have markings applied.

### **3.8 RESTORE**

3.8.1 Prior to floating the Cutter, remove the two transducer cover plates and deliver the transducer cover plate to the Coast Guard Inspector.

3.8.2 Prior to floating the Cutter, ensure that all paint drying and curing time criteria are in accordance with the paint manufacturer's instructions or the manufacturer's technical representative, whichever is greater.

3.9 Coordinate all inspections with the designated Coast Guard Inspector to minimize production delays.

**ITEM 5: COASTAL AND INLAND CUTTER TOWING – TO CONTRACTORS  
FACILITY**  
MI\_86300\_RRY\_0207\_230

**1 SCOPE**

The intent of this item is for the Contractor to tow the vessel from Coast Guard Island to the Contractors facility.

Government Furnished Property: None

**2 REFERENCES**

Coast Guard Drawings:

225B-WLB 601-2, Rev A, Booklet of General DRAWINGS2  
225B-WLB 581-1, Rev B, Anchor Handling System Arrangement

Applicable Documents:

NAVSEA SL 740-AA-MAN-010, Rev 3, U.S. Navy Towing Manual, 9/1/1988

**3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

**3.1 BACKGROUND** – The Coast Guard desires to tow the cutter from her temporary berth at Coast Guard Island, to a the contractor’s shipyard. The tow will be unmanned during the tow, unless the Contractor elects a riding crew. Any aspect of the tow not specifically covered by this specification shall be undertaken in accordance with the U.S. Navy Towing Manual. For the purposes of bidding this item, the contractor shall presume a “wet” day/hourly rate, inclusive of fuel.

**3.2 TOWING SYSTEM DESIGN**

3.2.1 The Contractor shall:

Select the appropriate towing vessel, and

Select suitable hawsers

3.2.2 Due to limitations in the cutters shaft locking system, the tow speed shall be no more than 9 Knots.

3.2.3 Suitable attachment points for the towlines shall be selected, using the cited drawings as a guide, and using existing structures and fittings.

**3.3 TOWING VESSEL(S) AND CREW**

3.3.1 The towing vessel shall be a U.S. flag towing vessel, with appropriate load lines for Inland service, commanded by a Master with the appropriate Towing endorsement.

3.3.2 The tow shall be assisted in and out of port or emergency ports by additional assist tugs. At least one (1) trail tug shall be used in restricted, inland and channel waters, and in any other circumstances where close quarters situations exist, to control the vessel in tow.

### **3.4 TOWLINE(S)**

3.4.1 Primary Towline – shall be wire, chain, or synthetic rope, appropriately sized per the techniques and data of the U.S. Navy Towing Manual.

3.4.2 The cost of Pilots, Pier Masters, Surveyors, Underwriters, and any other miscellaneous charges involved to effect a safe and satisfactory tow shall be borne by the contractor.

### **3.5 TOWING PLAN**

3.5.1 Prepare and submit a Towing Plan to USCG detailing the contractor's proposed towing arrangements and particulars of tow. The Towing Plan shall contain, as a minimum, the following information:

3.5.1.1 Description of primary towing tug and other tugs for assisting vessel during initial hookup and arrival at shipyard facility

3.5.1.2 Planned towing route

3.5.1.3 Towing schedule

3.5.1.4 Points of contact for shipyard site, Pilots, tug boats operators, etc.

3.5.1.5 Emergency phone number listing.

3.5.2 Submit two (2) copies of the proposed Towing Plan to the MLCP(v) no later than seven (7) days prior to the towing evolution schedule departure.

### **3.6 PREPARATION OF TOW**

3.6.1 Prior to accepting the tow, the Officer or Master of the towing vessel shall inspect the tow to confirm its seaworthiness and readiness for tow. The inspection include, but not be limited to:

3.6.1.1 Review the towing inspection checklist, shown in [Appendix H](#) of the U.S. Navy Towing Manual to ensure it is thorough, adequate, and properly completed.

3.6.1.2 Inspect tow rig, appendages, and attachment point to ensure that the tow is properly rigged.

3.6.1.3 Inspect the towline, bridle, and associated towing gear for wear and to ensure that improper substitutions have not been made in [fittings](#) and materials. Typical items to look for include:

- Mild steel substituted for forged steel in safety shackle pins.
- Stainless steel substituted for other high strength alloys.
- Improperly sized components.

3.6.1.4 Note whether a retrieving wire is rigged and if proper mooring lines are available.

3.6.1.5 Ensure that provisions have been made for quickly releasing the towline in an emergency.

## **ITEM 6: COASTAL AND INLAND CUTTER TOWING – TO SUISUN BAY**

MI\_86300\_RRY\_0207\_230

### **1 SCOPE**

The intent of this item is for the Contractor to tow the vessel from the Contractors facility to the MARAD Suisun Bay facility.

Government Furnished Property: None

### **2 REFERENCES**

Coast Guard Drawings:

225B-WLB 601-2, Rev A, Booklet of General DRAWINGS2  
225B-WLB 581-1, Rev B, Anchor Handling System Arrangement

Applicable Documents:

NAVSEA SL 740-AA-MAN-010, Rev 3, U.S. Navy Towing Manual, 9/1/1988

### **3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

**3.1 BACKGROUND** – The Coast Guard desires to tow the cutter from the contractor's shipyard to the MARAD Suisun Bay Reserve Fleet facility. The tow will be unmanned during the tow, unless the Contractor elects a riding crew. Any aspect of the tow not specifically covered by this specification shall be undertaken in accordance with the U.S. Navy Towing Manual.

#### **3.2 TOWING SYSTEM DESIGN**

3.2.1 The Contractor shall:

Select the appropriate towing vessel, and

Select suitable hawsers

3.2.2 Due to limitations in the cutters shaft locking system, the tow speed shall be no more than 9 Knots.

3.2.3 Suitable attachment points for the towlines shall be selected, using the cited drawings as a guide, and using existing structures and fittings.

#### **3.3 TOWING VESSEL AND CREW**

3.3.1 The towing vessel shall be a U.S. flag towing vessel, with appropriate load lines for Inland service, commanded by a Master with the appropriate Towing endorsement.

3.3.2 The tow shall be assisted in and out of port or emergency ports by additional assist tugs. At least one (1) trail tug shall be used in restricted, inland and channel waters, and in any other circumstances where close quarters situations exist, to control the vessel in tow.

### **3.4 TOWLINE(S)**

3.4.1 Primary Towline – shall be wire, chain, or synthetic rope, appropriately sized per the techniques and data of the U.S. Navy Towing Manual.

3.4.2 The cost of Pilots, Pier Masters, Surveyors, Underwriters, and any other miscellaneous charges involved to effect a safe and satisfactory tow shall be borne by the contractor.

### **3.5 TOWING PLAN**

3.5.1 Prepare and submit a Towing Plan to USCG detailing the contractor's proposed towing arrangements and particulars of tow. The Towing Plan shall contain, as a minimum, the following information:

3.5.1.1 Description of primary towing tug and other tugs for assisting vessel during initial hookup and arrival at shipyard facility

3.5.1.2 Planned towing route

3.5.1.3 Towing schedule

3.5.1.4 Points of contact for shipyard site, Pilots, tug boats operators, etc.

3.5.1.5 Emergency phone number listing.

3.5.2 Submit two (2) copies of the proposed Towing Plan to the MLCP(v) no later than seven (7) days prior to the towing evolution schedule departure.

### **3.6 PREPARATION OF TOW**

3.6.1 Prior to accepting the tow, the Officer or Master of the towing vessel shall inspect the tow to confirm its seaworthiness and readiness for tow. The inspection include, but not be limited to:

3.6.1.1 Review the towing inspection checklist, shown in [Appendix H](#) of the U.S. Navy Towing Manual to ensure it is thorough, adequate, and properly completed.

3.6.1.2 Inspect tow rig, appendages, and attachment point to ensure that the tow is properly rigged.

3.6.1.3 Inspect the towline, bridle, and associated towing gear for wear and to ensure that improper substitutions have not been made in [fittings](#) and materials. Typical items to look for include:

- Mild steel substituted for forged steel in safety shackle pins.
- Stainless steel substituted for other high strength alloys.
- Improperly sized components.

3.6.1.4 Note whether a retrieving wire is rigged and if proper mooring lines are available.

3.6.1.5 Ensure that provisions have been made for quickly releasing the towline in an emergency.

## **ITEM 7: LAY UP PREPARATIONS–BLANKING**

S\_86351\_RRY\_0207\_WMEC\_38

### **1 SCOPE**

The intent of this item is for the Contractor to prepare the cutter for long-term dead ship lay up, specifically, to blank external openings.

Government Furnished Property: None

### **2 REFERENCES**

Coast Guard Drawings:

82-TE 103-1, Rev B; Booklet of General Plans  
82-TE 4807-7, Rev -; Diagram–Main Engine SW Circ System  
82-TE 3801-18, Rev -; As-Built Arrgt Heating Vent Commun Spaces  
82-TE 3801-25, Rev A; Vent Mods–Po, And Crew Berth Rearrg  
82-TE 3801-26, Rev A; Vent Mods for Comm Space Rearrg  
82-TE 3802-9, Rev -; Diag Arrgt Heating Sys  
82-TE 4000-1, Rev B; Machy Arrg Plan  
82-TE 4000-2, Rev B; Machy Arrg Elev  
82-TE 4000-3, Rev -; Machy Arrg Plan & Elevs  
82-TE 4801-2, Rev D; Arrgt of Drainage Piping  
82-TE 4803-1, Rev -; Mag Flooding Arrgt & Test Casting  
82-TE 4804-4, Rev E; Arrgt of Fresh Cold & Hot Water Sys  
82-TE 4805-1, Rev -; Piping Arrgt for Priming Eng Raw Water Gauges  
82-TE 4807-3, Rev -; Arrgt of SW Piping & Vent Pip Plumb Fixtures  
82-TE 4808-1, Rev -; Piping Arrgt of VAC Flush Sewage Sys  
82-TE 700-2, Rev -; Docking Plan

Applicable Documents: None

### **3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

#### **3.1 HULL BLANKS**

3.1.1 Exterior blanking of at least one-half (½) inch thickness shall be installed on all openings below the waterline. Blanks shall be internally stiffened, box type closures except within the area extending from two (2) feet below to four (4) feet above the quiescent waterline, where only flush type blanks shall be used. Blanks shall be air tested to 2.5 psi, ensuring the pipe plug seals are maintained. A drawing or outline identifying all blanking, location and type, shall be provided to the Coast Guard upon completion. The size of each blank shall be noted on the associated drawing at corresponding locations. Drawings 82-TE 103-1, 4807-7, 4000-1, 4000-2, 4000-3, 4801-2, 4807-3, 4808-1 and 700-2 and may be used as backgrounds for preparing the needed Blanking Drawing, which may be a manually prepared red-line.

3.1.2 Install blanks on all overboard discharge openings above the floatation line (do not blank deck scuppers).

### **3.2 WEATHER DECK BLANKS**

- 3.2.1 All weather-deck fan openings shall be made watertight by blanking.
- 3.2.2 All ventilator cowls shall be removed and metal blanks installed.
- 3.2.3 A metal stack cover shall be secured airtight by welding all around.



## **ITEM 8: LAY UP PREPARATIONS – EXTERIOR HOUSEKEEPING**

S\_86351\_RRY\_0207\_WMEC\_38

### **1 SCOPE**

The intent of this item is for the Contractor to prepare the cutter for long-term dead ship lay up, specifically, to perform certain exterior housekeeping tasks.

Government Furnished Property: None

### **2 REFERENCES**

Coast Guard Drawings:

82-TE 103-1, Rev B; Booklet of General Plans

Applicable Documents: None

### **3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

#### **3.1 TOPSIDE PREPARATION**

3.1.1 Any remaining loose and/or unnecessary topside material or equipment shall be removed and/or stowed. See the list of Items To Be Stowed following paragraph 3.1.7 .

NOTE: The vast majority of these items will have already been stowed by the Cutter.

3.1.2 Decks shall be thoroughly cleaned. All deck drains and scuppers on vessel weather decks shall be cleaned and proven clear to the satisfaction of the Coast Guard representative.

3.1.3 Booms/cranes shall be properly secured in their cradles, with vangs, blocks, and other loose running gear tightly secured in suitable locations. All equipment shall be cleaned and drained of any hydraulic fluids.

3.1.4 Gyro repeaters, searchlights, speakerphones, signaling devices, insulators, and nonexpendable light fixtures, etc., shall be removed, tagged and stowed inside a secured storeroom. Wherever electrically operated equipment is to be removed from a weather-deck, its wiring shall never be cut but shall be disconnected from the equipment and pulled back into the ship. The opening thus created will be made watertight by blanking. The exposed connections shall be dead ended by disconnecting from the controller or switchboard.

3.1.5 Cutter's boats shall be stripped of all equipment, fuel tanks drained and made gasfree. Motors shall be completely drained of water, oil and fuel. Salt water cooling systems shall be flushed with fresh water. Remove spark plugs or injectors, if diesel driven, from motor and inject one-half pint of an approved preservation oil in each cylinder. Replace spark plugs or injectors after cranking engine over two complete revolutions. Clean and gasfree fuel tanks. .Dispose of all dated equipment, provisions and pyrotechnics. Air and stowage tank openings shall be left open for diffusion of air. Retain one liferaft for use of a riding crew accompanying the ship to a reserve fleet if required in the future. This raft shall be stowed below.

3.1.6 Portable fire extinguishers shall be stowed in a sealed storeroom.

3.1.7 ITEMS TO BE STOWED. All loose and/or easily removed items left aboard shall be stowed below decks or in secure lockers. These items include, but are not limited to, the items listed in the following Table. Storerooms for pilferable items shall be secured by welding, or alternatively secured at the discretion of the Coast Guard. Two screened openings of approximately 8" X 10" should be provided in welded storerooms to permit flow and circulation of dry air, one opening close to the deck and the other close to the overhead. Large, installed equipment, such as radar scanners and engine order telegraphs, may be left in place. The Contractor shall ensure in all cases that easily damaged components are not exposed to the weather.

NOTE: Items marked as "\*" are considered to be highly pilferable. The vast majority of these items will have already been stowed by the Cutter.

- Antennas, radio	- Barometers *
- Batteries (new and in a dry state)	- Binnacles *
- Binoculars *	- Blocks, portable
- Blueprints	- Books, instruction
- Boxes, storage	- Canvass
- Chronometers *	- Clinometers *
- Clocks *	- Clothing (stewards department)
- Compass, gyro and magnetic *	- Computers, all types with accessories *
- Correspondence, vessel	- CO2 Cylinders
- Davits, small gooseneck	- Equipment, galley
- Equipment, medical	- Equipment, office
- Equipment, painting	- Equipment, pantry
- Equipment, safety	- Extinguishers, fire
- Fans, room	- Floodlight, detachable
- Flags *	- Furnishings, room
- Gangways, brow	- Gratings, weather deck
- Guards, pipe	- Hood, binnacle
- Hose, fire, fresh, steam and air	- Instruments, electrical *
- Ladders, pilot/SOLAS/Jacob's	- Lashing, chain
- Lights, embarkation, cargo, and signal	- Line throwing apparatus
- Linen	- Lines, gantlines/heaving lines/tag lines/mooring lines
- Lining, grain and/or ammunition (sheathing)	- Log and bell books
- Machines, washing and drying	- Machines, ice making
- Machines, sounding	- Mattresses
- Medical equipment	- Meters, portable electric *
- Micrometers *	- Name boards, detachable
- Navigation instruments (parallel rules, dividers, etc.)	- Navigation equipment (RDF, LORAN, Sat Nav, etc.)
- Pillows	- Radar
- Radio, crew entertainment	- Radio, telephone
- Reels, wire (including wire)	- Refrigerators, domestic type
- Repeaters, gyro compass	- Rope, wire/natural/synthetic
- Scanners, radar	- Screening, weather deck ventilation and ducting
- Searchlights, detachable *	- Sextants *
- Spare parts, electrical, mechanical, radio, and navigation equipment	- Table, chart
- Tableware	- Tachometers
- Telephone, sound powered and interior communication	- Television sets *
- Tools, electrical, hand, and pneumatic	- Transceivers *
- Typewriters *	- Wrenches, special such as propeller, rudder, etc.

3.1.8 INVENTORY. The Contractor shall, in the conduct of this item, update the inventory of all non-consumable items left aboard previously prepared by the Cutter. Item name, description, quantity, condition and location shall be documented. One copy of this inventory shall be placed in the ship's safe or a lockable box in the Ship's or Master's Office, and one copy provided to the Coast Guard. Inventory sheets for each separate location shall also be placed inside storerooms and/or locations, affixed in a conspicuous place. Inventory locations shall remain accessible for the purpose of inventory verification by Coast Guard. Inventory verification activities shall be coordinated with the Coast Guard.

**ITEM 9: LAY UP PREPARATIONS – INTERIOR HOUSEKEEPING**  
S\_86351\_RRY\_0207\_WMEC\_38

**1 SCOPE**

The intent of this item is for the Contractor to prepare the cutter for long-term dead ship lay up, specifically, to accomplish certain interior housekeeping tasks.

Government Furnished Property: None

**2 REFERENCES**

Coast Guard Drawings:

82-TE 103-1, Rev B; Booklet of General Plans  
82-TE 4000-1, Rev B; Machy Arrg Plan  
82-TE 4000-2, Rev B; Machy Arrg Elev  
82-TE 4000-3, Rev -; Machy Arrg Plan & Elevs

Applicable Documents: None

**3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

**3.1 CLEANING.**

3.1.1 All spaces, including engine and boiler rooms, shall be thoroughly cleaned to remove all dirt, loose paint and scale, oil, grease, water, and other foreign materials.

3.1.2 All trash and debris shall be removed from the vessel.

3.1.3 Staterooms shall be left clean, dry and secured by locking. A full set of keys shall be provided to the Coast Guard. All drawers and lockers in berthing areas shall be emptied, cleaned and secured. All rooms, compartments and passageways shall be swept clean, damp mopped and left dust free. All recreational reading material, and personal effects shall be removed.

3.1.4 All toilets shall be cleaned and covered by plywood banded to the fixture, or other method, to prevent fouling. All sanitary traps, toilet bowls, sinks and wash basins shall be cleaned and dried out. If no trap drain plug is provided, then the trap shall be removed. All head and washroom doors shall be locked after inspection of the vessel.

3.1.5 All foodstuff and consumable liquids and material shall be removed from the vessel. Refrigerators shall be emptied and cleaned. Wash down all reefer boxes with a solution of sodium bicarbonate. All reefer box doors shall be blocked up to take the weight off the hinges.

3.1.6 Any weapons (including small arms) and ammunition encountered during the conduct of this item shall be the subject of a CFR.

3.1.7 Excepting supporting fire prevention systems (i.e., CO2), all gas cylinders (e.g., freon, oxygen, hydrogen, acetylene, etc.) shall be removed... All documentation shall be secured in file cabinets or the ship's safe for permanent storage.

### 3.2 ITEMS TO BE STOWED

3.2.1 All loose and/or easily removed items left aboard shall be stowed below decks or in secure lockers. These items include, but are not limited to, the items listed in the following table.

- |  |  |
|--|--|
| - Antennas, radio  | - Barometers *   |
| - Batteries (new and in a dry state)                                   | - Binnacles *  |
| - Binoculars *   | - Blocks, portable                                       |
| - Blueprints   | - Books, instruction                                     |
| - Boxes, storage   | - Canvass  |
| - Chronometers *   | - Clinometers *  |
| - Clocks *   | - Clothing (stewards department)                         |
| - Compass, gyro and magnetic *   | - Computers, all types with accessories *                |
| - Correspondence, vessel   | - CO2 Cylinders  |
| - Davits, small gooseneck  | - Equipment, galley                                      |
| - Equipment, medical   | - Equipment, office                                      |
| - Equipment, painting  | - Equipment, pantry                                      |
| - Equipment, safety  | - Extinguishers, fire                                    |
| - Fans, room   | - Floodlight, detachable                                 |
| - Flags *  | - Furnishings, room                                      |
| - Gangways, brow   | - Gratings, weather deck                                 |
| - Guards, pipe   | - Hood, binnacle   |
| - Hose, fire, fresh, steam and air                                     | - Instruments, electrical *                              |
| - Ladders, pilot/SOLAS/Jacob's   | - Lashing, chain   |
| - Lights, embarkation, cargo, and signal                               | - Line throwing apparatus                                |
| - Linen  | - Lines, gantlines/heaving lines/tag lines/mooring lines |
| - Lining, grain and/or ammunition (sheathing)                          | - Log and bell books                                     |
| - Machines, washing and drying   | - Machines, ice making                                   |
| - Machines, sounding   | - Mattresses   |
| - Medical equipment  | - Meters, portable electric *                            |
| - Micrometers *  | - Name boards, detachable                                |
| - Navigation instruments (parallel rules, dividers, etc.)              | - Navigation equipment (RDF, LORAN, Sat Nav, etc.)       |
| - Pillows  | - Radar  |
| - Radio, crew entertainment  | - Radio, telephone                                       |
| - Reels, wire (including wire)   | - Refrigerators, domestic type                           |
| - Repeaters, gyro compass  | - Rope, wire/natural/synthetic                           |
| - Scanners, radar  | - Screening, weather deck ventilation and ducting        |
| - Searchlights, detachable *   | - Sextants *   |
| - Spare parts, electrical, mechanical, radio, and navigation equipment | - Table, chart   |
| - Tableware  | - Tachometers  |
| - Telephone, sound powered and interior communication                  | - Television sets *                                      |
| - Tools, electrical, hand, and pneumatic                               | - Transceivers *   |
| - Typewriters *  | - Wrenches, special such as propeller, rudder, etc.      |

NOTE: Items marked as "\*" are considered to be highly pilferable.

3.2.2 Storerooms for pilferable items shall be secured by welding, or alternatively secured at the discretion of the Coast Guard. Two screened openings of approximately 8" X 10" should be provided in welded storerooms to permit flow and circulation of dry air, one opening close to the deck and the other close to the overhead.

3.2.3 Large, installed equipment, such as radar scanners and engine order telegraphs, may be left in place..

3.2.4 **INVENTORY.** An inventory of all non-consumable items left aboard shall be conducted by the Contractor. Item name, description, quantity, condition and location shall be documented. One copy of this inventory shall be placed in the ship's safe or a lockable box in the Ship's or Master's Office, and one copy provided to the Coast Guard. Inventory sheets for each separate location shall also be placed inside storerooms and/or locations, affixed in a conspicuous place. Inventory locations shall remain accessible for the purpose of inventory verification by Coast Guard. Inventory verification activities shall be coordinated with the Coast Guard.

**3.3 HAZARDOUS MATERIAL AND HAZARDOUS WASTE.** The Contractor shall submit a CFR for any medicines, medical wastes, Hazardous Material or Hazardous Waste encountered during the conduct of this item.

**3.4 BILGES.** Bilges and tank tops shall be pumped dry and made free of oil, water, and contaminants.

**3.4.1 FLOOR PLATES/GRATINGS.** Floor plates, gratings and supports shall be secured in place. Missing plates and handrails shall be replaced. Safety chains or wire are allowed in hazardous areas where plates and rails are missing.

**3.5 EXTERMINATION.** A qualified exterminator shall rid the vessel of both rodents and objectionable insects, and a "Deratification Certificate" shall be provided.

**3.6 DUNNAGE.** All wooden and temporary dunnage shall be removed from the vessel.

**3.7 TANK SOUNDINGS.** Current soundings of all tanks, including oil, fuel, and water left on board shall be provided, along with documentation listing the specific contents (complete description and amount) of each tank. Empty tanks shall be identified.

**3.8 LAMPING.** All emergency light fixtures and 50% of the other lighting in the following areas shall be lamped and operational: engine room, emergency generator room, boiler room, shaft alley, steering gear room, cargo spaces used for storage, and living spaces including the bridge.

NOTE: the original lighting distribution wirings is in fair to poor condition, and keeping it energized without a watch presents a risk of electrical fire. Therefore, all non-essential light bulbs shall be removed to keep the loads on the remaining energized circuits as low as possible, and all non-essential lighting and distribution circuits shall be tagged out.

**3.9 INTERIOR LOCKS.** Broken door locks on living space doors, lockers and washrooms shall be repaired or replaced. Two full sets of keys shall be provided to the Coast Guard.

**3.10 MERCURY SURVEY** Perform a compartment by compartment survey/inventory, looking for mercury-containing components, including:

Thermostats – Assume ANY thermostat for ANY function contains mercury.

Pressure indicators (manometers)

"silent" light switches (very rare in marine service)

Other mercury switches (tilt indicators, level indicators, etc)

Relays, particularly for low-current DC (rare)

Fluorescent light bulbs

Thermometers

Inclinometers

A quantity inventory is also required. Some suggested quantities:

Flourescent bulbs, 4 ft = 40 mg, 2 ft's proportionally less)

Thermostats—4 mg per thermostat

Thermometers—fever, .5 gram, Lab, 3 grams

Manometers, Inclinometers—350 grams per indicator

The attached Compartment List is furnished as a seed for the required inventory:

**STORIS Mercury Survey**

<b>COMPARTMENT NUMBER</b>	<b>COMPARTMENT NAME</b>	<b>Component(s) containing mercury (one per line, add lines to the table to suit)</b>	<b>Amount of mercury per component (see para 3.10 for suggestions)</b>
03 -77 -0 X	Weather Wheel House Top		
03 -112-0 L	Main Mast		
02 -73 -0 -X	Weather 02 Deck		
02 -77 -0 -C	Wheel House		
02 -95 0 -C	Radio Room		
02 -95 -2 -L	Passage		
02 -111-1 -C	Radar Room		
02 -118-0 -E	Uptake Space		
02 -129-0 -E	Incinerator Room		
01 -0 -0 -X	Weather 01 Deck Fr 21 Fwd		
01 -63 -0 -X	Weather 01 Deck Fr 63-77		
01 -77 -L	Stateroom		
01 -77 -2 -L	Stateroom		
01 -77 -3 -A	DC Locker		
01 -77 -4 -M	Gunnery Locker		
01 77 -5 -X	Weather 01 Deck Fr 77-147 Stbd		
01 -77 6 -X	Weather 01 Deck Fr 77-147 Port		
01 84 -0 -L	CO WE & WC		
01 -87 -0 -L	CO Cabin		
01 -88 -1 -A	Quarter Master Locker		
01 -88 -2 -A	Gunnery Locker		
01 -98 -1 -A	Abandon Ship Locker		
01 -98 -2 -A	Abandon Ship Locker		
01 -106-0 -A	Storage Locker		
01 -107-0 -A	Boarding Party Locker		
01 -112-0 -L	Passage		
01 -114-0 -E	Boiler Flats		
01 -140-0 -E	Hydraulic Room		
01 -147-0 -X	Weather 01 Deck Fr 147 Aft		
1 -0 0 -A	Paint Locker		
1 -7 -0 -E	Windlass Room		
1 -7 -L-A	Stbd Locker		
1 -7 -2 -A	Port Locker		
1 -21 -0 -A	Pump Stowage		
1 -21 -01 -X	Weather Main Deck Fr 21-63		
1 -63 -0 -L	Passage		
1 -63 -L-L	Upper Rec Deck		
1 -63 -2 -L	Female Crew Berthing		
1 -63 -4 -L	Female Washroom		
1 -77 -0 -L	Vestibule		
1 -77 -L-L	Wardroom		



**STORIS Mercury Survey**

<b>COMPARTMENT NUMBER</b>	<b>COMPARTMENT NAME</b>	<b>Component(s) containing mercury (one per line, add lines to the table to suit)</b>	<b>Amount of mercury per component (see para 3.10 for suggestions)</b>
1 -77 -2 -L	Sick Bay		
1 -84 -0 L	Entertainment & Telephone Space		
1 -84 -L-T	WT Trunk		
1 -84 -2 -A	Cleaning Gear Locker		
1 -86 -2 -L	Crews Mess		
1 -89 -0 -Q	Galley		
1 -89 -L-Q	Wardroom Pantry		
1 -100-1 -L	Stateroom 101		
1 -105-1 -L	Passage		
1 -108-1 -L	Stateroom 103		
1 -108-2 -T	WT Trunk		
1 -112-0 -L	Female Officer WR & WC		
1 -116-1 -L	Stateroom 105		
1 -118-0 -Q	Computer Room		
1 -118-2 -Q	Scullery		
1 -124-1 -L	Stateroom 107		
1 -126-0 -E	Engine Room Vestibule		
1 -126-2 -L	Passage		
1 -126-2 -T	WT Trunk		
1 -126-4 -L	CPO Mess		
1 -133-1 -L	Officers WR & WC		
1 -140-1 -L	Stateroom 109		
1 -140-2 -L	CPO Berthing		
1 -148-1 -L	Engineers SR 111		
1 -150-0 -E	Emergency Generator Room		
1 -156-1 -L	Exec Officers SR 113		
1 -158-2 -L	CPO WR & WC		
1 -164-0 -C	Gyro Room		
1 -164-1 -T	WT Trunk		
1 -164-2 -A	Locker		
1 -165-2 -L	P0 WE& WC		
1 -167-1 -L	Stateroom 115		
1 -172-1 -A	Supply Locker		
1 -172-2 -L	First Class Berthing		
1 -176-0 -L	Aft Vestibule		
1 -176-1 -Q	Ships Office		
1 -186-0 -A	Repair #3		
1 -186-0 -L	End Passage		
1 -186-1 -A	Supply Locker		
1 -195-1 -Q	Laundry		
1 -195-2 -L	First Class Lounge		
1 -198-1 -Q	Exchange		
1 -207-0 -M	Armory		

**STORIS Mercury Survey**

<b>COMPARTMENT NUMBER</b>	<b>COMPARTMENT NAME</b>	<b>Component(s) containing mercury (one per line, add lines to the table to suit)</b>	<b>Amount of mercury per component (see para 3.10 for suggestions)</b>
1 -207-1 -T	Escape Trunk		
1 -207-3 -A	Linen Locker		
2 -0 -0 -W	Fore Peak Tank		
2 -8 -0 -Q	Chain Locker		
2 -14 -0 -Q	DC Shop		
2 -35 -0 -Q	ET Shop		
2 -35 -1 -L	Passage		
2 -35 -3 -A	EM Stores		
2 -42 -L-Q	Deck Office		
2 -49 -0 -A	Dry Stores		
2 -53 -1 -A	Repair #2		
2 -63 -0 -L	Crews Showers		
2-63 -01 -L	P0 Berthing		
2-63 -02 -L	Crews WR & WC		
2-84 -0 -L	Crews Berthing		
2-84 -L	Lower Rec Deck		
2-144 -0 -E	Enclosed Operation Station		
2 164-1 -Q	Machine Shop		
2 -164-2 -Q	Electrical Shop		
2 -174-2 -E	Log Office		
2 -207-0 -E	Steering Gear Room		
3 -8 -0 -w	Fresh Water Tank		
3 -24 0 W	Fresh Water Tank		
3 -35 -0 -A	MAA Stowage		
3 -49 -0 -E	Sewage Abatement		
	Gray Water Tank		
	Sewage Main Holding Tank		
3 -63 -O -E	Vacuum Flush Room		
3 -63 -1 -A	Seabag Locker		
3 -63 -2 -M	Ammo Stowage		
3 -70 -0 -A	Foul Weather Gear Locker		
3 -80 -0 -L	Passage		
3 -84 -0 -A	Dairy Room		
3 -84 -01 -A	Meat Room		
3 -84 -1 -L	Vestibule		
3-84 -02 -E	Refrig Machinery & Engineers Stores		
3 -97 -1 -A	Fruit & Vegetable Room		
3 -112-0 -F	Diesel Oil Tank		
3 -112-1 -F	Diesel Oil Tank		
3 -112-2 -F	Diesel Oil Tank		
3 -126-0 -E	Generator Room		
3 -154-0 -F	Diesel Oil Tank		
3 -154-1 -F	Diesel Oil Tank		
3 -154-2 -F	Diesel Oil Tank		
3 -164-0 -E	Motor Room		
3 -186-0 -w	Fresh Water Tank		

**STORIS Mercury Survey**

<b>COMPARTMENT NUMBER</b>	<b>COMPARTMENT NAME</b>	<b>Component(s) containing mercury (one per line, add lines to the table to suit)</b>	<b>Amount of mercury per component (see para 3.10 for suggestions)</b>
3 —186—1 —w	Fresh Water Tank		
3 —186—2 —w	Fresh Water Tank		
3 —193—0 —A	Hawser Locker		
4 —128—2 —F	Waste Oil Tank		
		<b>Total Mercury onboard</b>	



## **ITEM 10: LAY UP PREPARATIONS – MECHANICAL AND PIPING**

S\_86351\_RRY\_0107\_WMEC\_38

### **1 SCOPE**

The intent of this item is for the Contractor to prepare the cutter for long-term dead ship lay up, specifically, to secure mechanical systems and piping.

Government Furnished Property: None

### **2 REFERENCES**

Coast Guard Drawings:

82-TE 103-1, Rev B; Booklet of General Plans  
82-TE 4807-7, Rev -; Diagram–Main Engine SW Circ System  
82-TE 9300-1, Rev -; Diag Piping Layout Fire Ext Sys CO2 Portable  
82-TE 2200-2, Rev -; Steering Gear Arrg  
82-TE 3801-18, Rev -; As-Built Arrgt Heating Vent Commun Spaces  
82-TE 3801-25, Rev A; Vent Mods–Po, And Crew Berth Rearrg  
82-TE 3801-26, Rev A; Vent Mods for Comm Space Rearrg  
82-TE 3802-9, Rev -; Diag Arrgt Heating Sys  
82-TE 4000-1, Rev B; Machy Arrg Plan  
82-TE 4000-2, Rev B; Machy Arrg Elev  
82-TE 4000-3, Rev -; Machy Arrg Plan & Elevs  
82-TE 4801-2, Rev D; Arrgt of Drainage Piping  
82-TE 4803-1, Rev -; Mag Flooding Arrgt & Test Casting  
82-TE 4804-4, Rev E; Arrgt of Fresh Cold & Hot Water Sys  
82-TE 4805-1, Rev -; Piping Arrgt for Priming Eng Raw Water Gauges  
82-TE 4807-3, Rev -; Arrgt of SW Piping & Vent Pip Plumb Fixtures  
82-TE 4808-1, Rev -; Piping Arrgt of VAC Flush Sewage Sys

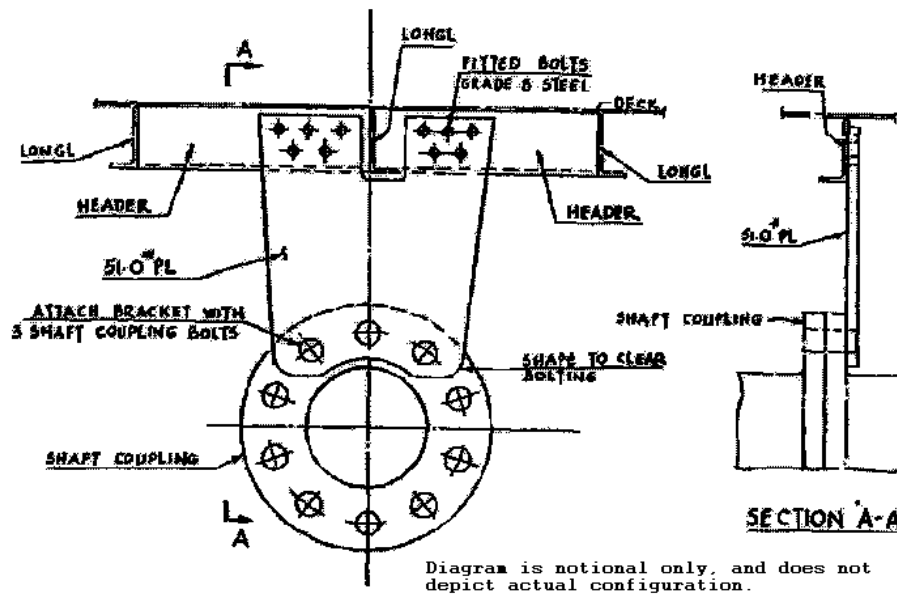
Applicable Documents: NONE

### **3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

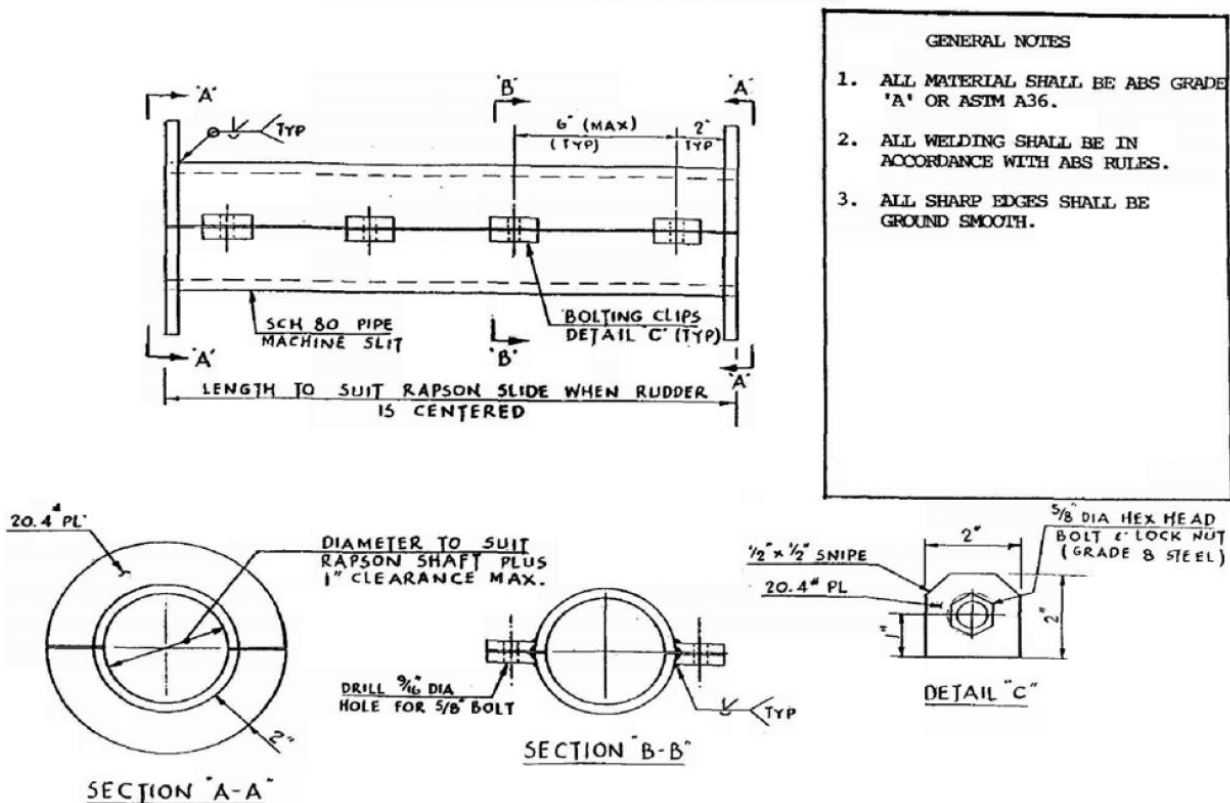
#### **3.1 LOCKING DEVICES**

3.1.1 A shaft-locking device shall be installed in accordance with the following sketch. Shaft locks shall be painted with 1 coat of silicon alkyd bright yellow paint over epoxy primer on bare white sandblasted steel. Coast Guard Drawings 82-TE 103-1, 4000-1, 4000-2, 4000-3, 1101-5, 4301-2, and 4301-3, Rev -; Prop Shaft Mod, Shaft Arrg shall be consulted in devising the shaft locking device.



Sketch of Shaft Locking Device

3.1.2 The rudder shall be physically secured by rudder lock in the midships position. The following sketch shows a commonly used rudder lock. Coast Guard Drawings 82-TE 2200-2 shall be consulted in devising the rudder lock. The steering motors shall be secured and all hydraulic valves closed. Rudder locks shall be painted with 1 coat of silicon alkyd bright yellow paint over epoxy primer on bare white sandblasted steel.



3.1.3 SEA VALVES. All sea valves and all valves effecting seaworthiness shall be secured with valve wheels chained and locked to the valve body. Keys shall be turned over to Coast Guard. All electric, hydraulic, and pneumatic-operated valves shall be disabled at the controller. The contractor shall take up on packing glands or repack valves as required, leaving valves and reach rods in good working order. Any leaking valves shall be repaired, replaced, or blanked at the flange under a contract change.

3.1.4 CO2 SYSTEM. All CO2 system(s) shall be disarmed and all CO2 bottles disconnected from discharge piping and capped. Low-pressure CO2 systems shall be emptied upon deactivation. All other types of fixed firefighting systems shall be disabled. CGC STORIS has a tank of AFFF located at the top of the ladder in the vestibule (1-126-0-E) as you go down to the Engine Room and 2 large CO2 cylinders with a hose reel at the top of that same ladder.

3.1.5 DRAINING. All systems shall be completely drained of water and dried. All salt water lines throughout the ship shall be flushed with fresh water and dried.

3.1.6 BOILERS, AUXILIARY. Boiler(s) shall be thoroughly cleaned on the waterside and dried out. The fire and/or exhaust sides including uptakes and stack shall be thoroughly cleaned of all soot and other residue. One manhole plate and one handhold plate shall be removed and wired adjacent to their respective openings. Remove all soot, dust and debris from machinery spaces.

3.1.7 DIESEL ENGINES, MAIN AND AUXILIARY MACHINERY. The main propulsion systems, auxiliary maneuvering devices (thrusters), auxiliary generator systems and emergency generators shall be thoroughly externally cleaned. All access covers, open tanks, and machinery shall be secured in good order after cleaning. The emergency diesel generator shall be operable. Emergency generator fuel oil tanks shall be treated with BIOBOR.

3.1.8 OZONE DEPLETING SUBSTANCES (REFRIGERATION SYSTEMS). Ship's refrigeration system(s) and air conditioning system (s) shall be evacuated. Refrigerant gasses shall be bottled and removed. All chilled water air conditioning and refrigeration systems shall be drained and blown dry using compressed air. All controls shall be placed in the demand position to ensure complete draining and blowdown of piping, chillers, and air handling units. The compressors shall be tagged with metal or plastic tags to show all of the precautions taken. Compressor units shall be disconnected from their prime movers to prevent damage in case of accidental energizing of motors.. All ozone depleting substances shall be recovered from refrigeration and air conditioning systems and be disposed of/recycled in accordance with EPA regulations.

## **ITEM 11: DRYDOCKING ACCOMPLISH**

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### **1 SCOPE**

The intent of this item is to drydock the cutter and when work requiring the cutter to be in dock is completed the Contractor may refloat the cutter and complete any remaining work with the cutter pier side.

Government Furnished Property: NONE

### **2 REFERENCES**

Coast Guard Drawings:

82-TE 700-1, Rev H; Docking Plan  
82-TE 700-2, Rev -; Docking Plan

Applicable Documents:

[MLCPAC Standard Specification 997, Rev -, 3/29/2004; Drydocking  
The Society for Protective Coatings SSPC-SP 12/NACE No.5, Rev -, 7/1/2002; Surface Preparation  
and Cleaning of Steel & Other Hard Materials by High and Ultrahigh Pressure Water Jetting  
Prior to Recoating](#)

### **3 REQUIREMENTS**

The Contractor shall provide all labor and material to accomplish the following in accordance with the General Requirements:

**NOTE:** Drydock certification per MLCPAC Std Spec 997 is required prior to contract award.

3.1 Accomplishment of this item includes submitting all deliverables, i.e. pumping plan, check off list, etc. and meeting all scheduled events as identified in MLCPAC Std Spec 997.

3.2 Drydock the cutter in accordance with CG Dwg 82-TE 700-1 within 48 hours after the cutter's arrival at the Contractor's facility. The cutter shall be drydocked in position "3" as shown on CG Dwg 82-TE 700-1. If drydocking does not occur during daylight hours the Contractor shall provide adequate lighting.

3.3 Provide the Contracting Officer with a copy of the stability calculations for the ship in the projected arrival loading condition as well as calculations for the cutter in drydock at least 72 hours prior to docking in accordance with MLCPAC Std Spec 997, Appendix A.

**NOTE:** The cutter will provide the Contractor with a projected arrival liquid loading condition (i.e. tank sounds) one week prior to start of the availability.

3.3.1 The Coast Guard Inspector will provide the Contractor with an up-to-date list of all tank soundings. No liquids will be shifted without permission of the Dockmaster. A log of liquid load transfers will be maintained by the cutter and the Dockmaster.

3.4 Prior to drydocking the cutter, the Contractor shall hold a Pre-Docking Conference at least 24-hours in advance with the NESU/MLC Representative, and cutter Representative to discuss, as a minimum, the following; docking



procedures, method of moving the cutter into the drydock, number and position of linehandlers, docking safety and emergency procedures. Provide the docking plan one day in advance to the Pre-Docking Conference.

3.4.1.1 At Pre-Docking Conference provide the Coast Guard NESU PE/MLC Representative with a copy of the stability calculations for the ship in the current cutter condition as well as calculations for the cutter in drydock within 72 hours prior to docking to review calculations in accordance with MLCPAC Std Spec 997, Appendix A.

3.5 Give the Coast Guard Inspector a written notice of the dry-docking time at least 48 hours in advance. This will allow time for the Coast Guard Inspector to examine the blocking arrangement, material, and clearances in accordance with CG Dwg 82-TE 700-1 and the requirements of section 3.3.1 of this item. The Contractor shall correct all deficiencies reported by the Coast Guard Inspector prior to dry-docking the cutter.

3.6 Use new 2" minimum soft cap crushing blocks in accordance with CG Dwg 82-TE 700-1. Fabricate soft caps in accordance with NSTM Chapter 997.

3.6.1 Coordinate work on this item with Definite Item "Hull Plating, Underwater Body Inspection." Ensure block placement does not interfere with void plug removal and inspection.

3.7 Before dry-docking the cutter: take draft readings both fore and aft and submit a copy to the Coast Guard Inspector; ensure the shaft alignment readings required in Definite Item, Propulsion Shafting Remove and Install, have been taken.

3.8 Obtain permission to dry-dock the cutter from the Coast Guard NESU PE/MLC Representative.

3.8.1 The Coast Guard Inspector and the Contractor shall complete the pre-docking check list of MLCPAC Std Spec 997, Appendix C, prior to docking.

3.8.2 The Dockmaster shall take control of the cutter as soon as the bow (if the cutter is entering the drydock bow first) or stern (if the cutter is going in by the stern) crosses the sill of the drydock.

3.9 Move the cutter in a "dead ship" condition into the dry dock.

3.10 Use divers to check the positioning of the blocks and the cutter's appendages before drydocking the cutter on the blocks.

3.11 Permit no strain or damage to the cutter during the drydocking of the cutter. If strain or damage to the cutter is observed, stop the process, make an inspection, and take corrective measures before proceeding with the docking. Obtain permission to proceed from the Commanding Officer/Officer in Charge.

3.11.1 During all movements of the cutter, provide line, line handlers and fenders during docking and undocking.

3.12 Provide spigots to direct all liquids from the cutter's overboard discharges away from areas of work while the cutter is out of the water.

3.13 Thoroughly check the cutter's docking plan for any inaccurate data or inconsistency between the cutter and drawing. Mark up a copy of the drawing, using colored marker to show any inconsistencies. Make a notation on the plan of the position of the docking blocks. Submit the marked-up plan to the Coast Guard Inspector before refloating the cutter for verification of any changes made. Any corrections to the plan discovered by the Coast Guard Inspector shall also be indicated on the marked-up drawing prior to refloating. Submit a Condition Found Report to Coast Guard Inspector indicating any changes.

3.14 If a floating dry dock is used, have available at all times a qualified pump operator and personnel to operate the dry dock in event of any emergency. Inform the Coast Guard at the arrival conference as to how fast Contractor personnel can respond to a flooding emergency.

### **3.15 HULL CLEANING AND INSPECTION**

3.15.1 Within 4 hours of drydocking the cutter, conduct a low-pressure water cleaning (LP WC) (5,000 psi when antifouling is being removed and 3,000 psi when it is not) in accordance with SSPC-SP 12 of the entire underwater body up to and including the boot top, including strainers, fairwaters, rope guards, sea chest interiors, and hull appendages. The water cleaning shall be with fresh water at a maximum applicable pressure to remove all traces of marine fouling, surface oxidation, and loose or blistered paint.

3.16 If a floating dry dock is used, have available at all times a qualified pump operator and personnel to operate the dry dock in event of any emergency. Inform the Coast Guard at the arrival conference as to how fast Contractor personnel can respond to a flooding emergency.

### **3.17 TRANSDUCER**

3.17.1 Remove fouling, salt, oil, and grease from the various transducers with synthetic scouring pads and water-soluble detergent. Rinse the transducers with a clean rag dipped in fresh water and thoroughly dry the transducer with a clean rag.

3.17.2 After cleaning and inspection of the transducers, and prior to painting the underwater body, install the Government-furnished transducer cover plates. Coat the cover plate bolts lightly with anti-seize compound before installing.

3.18 Provide a written notice to the Coast Guard Inspector of the refloating of the cutter at least one working day prior to refloating.

3.18.1 The Contractor shall obtain Coast Guard Inspector verification that all work items requiring dry-docking have been completed, all testing required has been completed, and all authorized openings have been closed. Ensure that the pre-float check list of MLC PAC Std Spec 997, Appendix C has been completed in conjunction with the Coast Guard Inspector.

3.18.2 Refloating will not proceed until the Coast Guard Inspector and Contractor are in agreement as to the loading condition of the cutter.

3.18.3 Obtain permission to refloat the cutter from the Coast Guard NESU PE/MLC Representative.

3.18.4 Refloat the cutter. Submerge the hull until all sea openings are under water and then, while the cutter is still on the blocks, cease submersion. Check all sea openings and connections for leaks. Give special attention to those areas where work has been performed. If any leaking occurs which can not be stopped by simple corrective tightening procedures, redock the cutter, repair the problem, and repeat the refloating procedure.

3.18.5 Once refloated, take fore and aft draft readings and give a copy to the Coast Guard Inspector. Bring the cutter along side the Contractor's dock and securely moor.

3.19 Coordinate all inspections with the designated Coast Guard Inspector to minimize production delays.